Title Alcohol use and misuse of university students: the role of personal and environmental factors

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ALCOHOL USE AND MISUSE OF UNIVERSITY STUDENTS: THE ROLE OF PERSONAL AND ENVIRONMENTAL FACTORS

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ALCOHOL USE AND MISUSE OF UNIVERSITY STUDENTS: THE ROLE OF PERSONAL AND ENVIRONMENTAL FACTORS

by

DILSHODA SHARIPOVA

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Abstract

The aim of the mixed methods study was to explore students' alcohol use and misuse taking into account personal, micro, macro level factors influencing their choice in the behaviour performance based on analysis of quantitative data obtained from longitudinal surveys and interpreting narrative data obtained during interviews and to use the findings from the quantitative and the qualitative studies to facilitate focus groups of university services, to discuss and recommend variables to be targeted during interventions for students.

The first study was a cross sectional quantitative study in which the questionnaire constructed for the current study has been evaluated and the reliability of the measures was identified. In addition, the correlations of the study variables have been explored. The path analysis has been performed to examine the Theory of Planned Behaviour, Self-Determination Theory, Prototype Willingness Model and Social Learning Theory.

The second study a longitudinal quantitative study in which before mentioned theories have been explored in a 3 month follow up. The change over time have been investigated by constructing models, path analysis, and the predictors of the change in outcome variables alcohol consumption, alcohol related problems, frequency of alcohol use, units consumed in a single occasion and binge drinking occasions, have been identified.

The third study, a qualitative study, interviews with the students were organised to explore further the variables used in the study and explain the quantitative findings with help of interview data. The data assisted in identifying

contextual factors of alcohol use and locate the components of researched theories within this context.

The fourth study, another qualitative study, which explored the alcohol use of university students from the perspectives of the staff of university support services. Extra contextual factors have been identified and were added to the matrix of students' alcohol use.

The results of the research supported the use of the theories selected as Self-Determination Theory explained the predictors of Theory of Planned Behaviour.

Declaration

I declare that this thesis is my own unaided work. It is being submitted for the degree of Doctor of Philosophy at the University of Bedfordshire.

It has not been submitted before for any degree or examination in any other University.

Name of candidate: Signature:

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List of Abbreviations

AUDIT	Alcohol Use Disorder Identification test
BIS	Barratt's Impulsiveness Scale
BPS	British Psychological Society
DMQ	Drinking Motives Questionnaire
GHQ	General Health Questionnaire
GHS	General Household Survey
HSE	Health Survey for England
NHS	National Health Service
OIT	Organismic Integration theory
PBC	Perceived Behavioural Control
PLOC	Perceived Locus of Causality
PWM	Prototype Willingness Model
QUAL	Qualitative Research
QUAN	Quantitative Research
SDT	Self-Determination Theory
SLT	Social Learning Theory
TDF	Theoretical Domain Framework
TPB	Theory of Planned Behaviour
WHO	World Health Organisation

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Chapter One: Introduction

1.1 Background

Alcohol is a psychoactive substance and it is known for its dependence-producing properties (World Health Organisation [WHO], 2015). WHO (2015) reports excessive use of alcohol can cause various kinds of diseases. The number of diseases it can cause was calculated to be over 200. Alcohol dependence, liver cirrhosis, cancers and injuries are commonly is effect of excessive use of alcoholic beverages. Approximately 3.3 million deaths were due to alcohol use in 2012, which is 5.9% of all global death.

Public Health England (2016) reported that currently it is estimated that 1.6 million adults in England have some level of dependence to alcohol and 10.8 million of them drinking to extend that it is causing risk to their health. There are an estimated 1.6 million adults in England who may have some level of alcohol dependence. In regards to mental health patients, 44% of them reported to have drug and harmful alcohol use, and 45% of the patients who committed suicide had a history of alcohol misuse during 2002 -2011. Alcohol caused premature death to 22,481 in 2013, which could have been prevented.

The onset for alcohol consumption in England according to the survey in 2004 showed 20% of 11 to15-year-olds have been drunk over last 4 months, about 11% of 11-2 year olds and 61% of 15 year olds (The Information Centre, 2007). It was suggested that one of the reasons alcohol becoming popular among young people is the glamorisation of it through youth culture, media, fashion as the marketing trough some sources like films and internet is not regulated (Alcohol and Public Health, 2008) raises more concern as early onset of alcohol use predicts alcohol abuse and dependence in later life (Grant & Dawson, 1997).

The purchase of alcoholic drinks increased from 527 millilitres per person per week to 792 ml per person per week in 1992 and 2003/04 respectively. In 2012 it was reduced to 700 ml. Affordability of alcohol has increased as in 2014 it is 53.8 per cent more affordable than in 1980 (Lifestyles Statistics Team, 2015).

Binge drinking is common among university students (Van Hout & Connor, 2008). It can be argued in that respect that it is due to the influence of the drinking culture in the UK. It is different from other continental cultures where people have a cafe culture in which coffee is consumed during a get together (Doward, 2016; Stagg, 2012). In that culture alcohol is mostly consumed during a meal (Jayne, Valentine, & Holloway, 2008). Binging was common in the UK for centuries (Herring, Berridge, & Thom, 2008). The risky alcohol consumption can lead to accidents, drinking and driving, unsafe sex (National Institute on Alcohol Abuse and Alcoholism, 2015)

The research suggests at college and university young adults establish drinking habits which can be predictive of their alcohol dependence later in life (Bewick et al., 2013).

Most of the cases excessive alcohol consumption leads to health problems. Its effect to the body can be noticed after several years of excessive consumption resulting with the occurrence of high blood pressure, liver problems, increased risks of having cancer and heart attacks (NHS, 2012). Harmful effect of alcohol goes beyond the drinker. For example, drinking and driving caused 9,031 deaths in the UK in 2009. In addition, the behaviour is associated with social problems: failure to meet basic obligations, family and work conflicts (BBC Health, 2012), poor academic performance (Durkin, Wolfe, & Clark, 2005).

Behavioural consequences over the years showed 8.3% of male students and 4.3% female students had been in an accident in which someone was hurt, 30% male and 13.8 females had broken the law in which police were not involved, 18.6% male and 6.9% females have hidden the information on units they consumed (Gill, 2002). Another study reported

property damage caused by 20% of males and 6% of females (West, Drummond, & Eames, 1990). Meilman and Haygood-Jackson (1996) found 88% of students had had a hangover in the previous year 32.4% of which had had one ten or more times, acts of violence were committed by 14.5%, 20.9% had been hurt or injured, 27.9% had been involved in arguments and fights. Thus, students' excessive alcohol use needs greater attention.

1.2 Overview of the Chapters

This thesis consists of 11 chapters. Chapter 1 provides background to the problem and a short overview of the chapters. Chapter 2 provides the background for the current study starting with an introduction to the problems, followed by the theoretical background. Furthermore, it presents empirical studies which have used the theories and a combination of the theories to explore alcohol consumption. Later in the chapter there is some information about the variables researched and reasons for their inclusion in the study. The evaluation of the current studies is provided at the end of the chapter.

Chapter 3 provides information about the research design employed in the study. It describes the phases of the current research and the aims and hypotheses for each study. Chapter 4 includes the information about the pilot study, initial questionnaire design, reliabilities for the measures used, correlations and the results of multiple regression which was conducted for initial exploration of the study variables.

Chapter 5 is about the questionnaire design and it has a collection of the measures used and the rationale for their use. Chapter 6 describes and reports the results of the cross sectional study, Phase I.

Chapter 7 includes the steps taken to conduct Phase II of the research and longitudinal study. The results and the discussion of the results of the longitudinal data is presented in this chapter.

Chapter 8 explains, Phase III, the interviews conducted with the students. It describes the framework analysis applied to analyse the data obtained from the interviews. The results of the analysis and discussion are presented in this chapter. Chapter 9 comprises the second qualitative study, Phase IV of the mixed methods study, and reports the findings from the framework analysis of focus groups with university support services staff. Chapter 10 synthesises all four phases of the research and draws inferences and connects the studies together. Chapter 11 is the final chapter and is comprised of the discussion of the findings for each phase of the study. Limitations, recommendations, future directions for policy, practice and research are described. Recommendations for possible interventions are also discussed in Chapter 11.

Chapter Two: Literature Review

2.1 Introduction

This chapter discusses the social cognitive theories used to learn about alcohol use. As well as providing an overview of the theories used for the current study, the chapter also discusses the results of previous empirical research in relation to those theories, or a combination of them, as well as the variables adopted in the current study. The final part will discuss recent research conducted in the area. The chapter provides rationale for the decisions made during the current study.

2.2 Alcohol Consumption

Evidence suggests that binge drinking (see section 2.2.1) is common among university students (Van Hout & Connor, 2008). This has been attributed to the influence of the drinking culture in the UK (Harrison, 1994). This is notably different from other continental cultures where people have a cafe culture in which drinking coffee is a big part of it, like pub culture and beer in England (Doward, 2012: Stagg, 2012). In continental cultures, alcohol is consumed during a meal (Jayne, Valentine, & Holloway, 2008). Binging has been common in the UK for centuries. William of Malmesbury (c. 1095–1143) historian and chronicler, in his 'History of the Kings of England' suggests that the success of the Normans can at least be partly put down to the drunkenness of the English soldiers (Barr, 1995). Harrison (1994) wrote "Thomas Trotter, in his Essay on Drunkenness published in 1804, was among the earliest to describe habitual drunkenness as a disease" (p.23). Recent research shows that alcohol consumption can lead to accidents, drinking and driving, and unsafe sex (National Institute on Alcohol Abuse and Alcoholism, 2015).

Similarly, research also suggests that at college and university, young adults often establish drinking habits which can be predictive of their alcohol dependence later in life (Bewick et al., 2013).

There is also evidence to suggest that excessive alcohol consumption can lead to health problems. Its harmful effect on the body can be noticed after several years of excessive consumption resulting in the occurrence of high blood pressure, liver problems, increased risks of having cancer and heart attacks (National Health Service [NHS], 2012). Harmful effects of alcohol has been well documented. For example, alcohol caused 8,697 deaths in 2014 (Office for National Statistics [ONS], 2016), only drinking and driving caused 9,031 deaths in the UK in 2009 (ONS, 2011). In addition, the behaviour is associated with social problems: failure to meet basic obligations, family and work conflicts (BBC Health, 2012), poor academic performance (Durkin, Wolfe, & Clark, 2005).

The research suggests young people's drinking habits are influenced by their attitudes and beliefs towards the behaviour, motivation, past behaviour and their perception towards their peers' approval of the behaviour (Hagger et al., 2012; Johnston & White, 2003; Zimmermann & Sieverding, 2010). All these components can be examined with the use of the theory of planned behaviour (TPB) (Ajzen 1985; Johnston & White, 2003), the prototype willingness model (PWM) (Rivis, Abraham, & Snook, 2011) and the self-determination theory (SDT) (Hagger et al., 2012).

A study by Gill (2002) reviewed articles in relation to alcohol consumption of undergraduates over the last 25 years. They reported consequences of drinking in this population. Repercussions of heavy drinking have been presented as 'secondary' binge effects, effect on sexual health, behavioural consequences, and effect on academic performance. Over the past 25 years the following has been recorded. Male (8.5%) students and female (3.5%) had broken friendship as a consequence of alcohol misuse (Orford, Waller

& Peto, 1974). West et al. (1990) reported 16.8% male and 5.5% female students had neglected their obligations, 3.2% males and 0.7% females had lost friends, students who had been assaulted were 19% male and 10% female. A study conducted in 1994 reported that 50% of males who drink more than 35 units per week had been physically hurt, 15% hurt others (File, Mabbut, & Shaffer, 1994). Delk and Meilman (1996) reported 53.2% of people having done something, which they regretted. Studies also show that a significant number of students had been taken advantage of sexually, whilst some had taken advantage of another person as a direct result of alcohol consumption (Delk & Meilman, 1996).

Gill's (2002) study also showed that 8.3% of male students and 4.3% female students studied had been in an accident in which someone was hurt, 30% male and 13.8% of females had broken the law in which police were not involved, 18.6% of males and 6.9% of females had hidden the information on units they consumed (Gill, 2002). Another study reported property damage caused by 20% of males and 6% of females (West et al., 1990). Similarly, 88% of the students in Mailman and Haywood-Jackson's (1996) study also had had a hangover in a previous year, 32.4% of which had had one ten or more times. It also found that 14% committed acts of violence 20.9% had been hurt or injured, and 27.9% were involved in arguments and fights.

Several studies reported that alcohol was one of the reasons for poor academic performance and the reason for missing lessons. According to Orford, Waller and Peto (1974) 11% of males and 8.9% of females had missed their lesson, 8.1% of males and 5.0% of females reported poor working. Collier and Beales (1989) mentioned 53% of students had experienced negative effects of alcohol to their performance. Meilman and Haygood-Jackson (1996) reported 56.2% had missed a class and 19.2% had not performed well in academic work. A Webb, Ashton, Kelly, and Kamali (1998) study reported 42% of male and 36.4% of female medical students reduced their effectiveness in academic work due to alcohol

consumption. Pickard, Bates, Dorian, Greig, and Saint (2000) reported 36.8% of male and 52.2% of females informed about their academic performance being affected as a consequence of alcohol use at least one day in the last month.

The review by Gill (2002), while reporting about female students, argues that the percentage of women who consume alcohol exceeding 14 units a week, can be as high as 40%. Females are seen to be similar to males in their alcohol use. Studies also suggest that women binge drink more alcohol than their male counterparts (Pickard et al., 2000; Underwood & Fox (2000). Pickard et al., (2000) and Underwood and Fox (2000) also reported lower levels of abstention in female. This is arguably due to the fact the sample selected for both studies were medical students and these students have the tendency to drink more or as reported by Flaherty and Richman (1993), who suggest that females also tend to drink as much as their male friends.

However, Wechsler, Dowdall, Davenport, and Rimm (1995) highlight that women do not tend to accept the fact they binge drink. The study shows that whilst 22% male students accepted their binge drinking, with women the numbers were only 8%. Cooke, French and Sniehota (2010) found that female students were giving higher estimates to recommended guidelines, the effect of which is the avoidance of the health promotional messages leading to unpleasant consequences.

2.2.1 Definitions of binging. Measures of alcohol units and binging definitions differ according to the cross-country variations used (Dawson, 2011). Comparing the data across the world is complex as each area has its own *measures of units* and *binge drinking* definitions of amount can be very different, as one drink in Japan is 19.75g and in the UK it is 8 g. The definitions not only vary across countries. There were some abnormalities observed within UK studies while reporting alcohol use (McAlaney & McMahon, 2006).

Binge drinking is used to describe a single drinking session when a certain number of drinks is consumed (Gmel, Rehm, & Kuntsche, 2003), for example five drinks for men and 4 for women (Wechsler, Davenport, Dowdall, Moeykens, & Castillo, 1994). There is also argument around difference between the negative consequences, which is followed by single episodes of drunkenness (Wright, 1999) rather than the long-term consequences of exceeding the weekly recommended amount (Department of Health [DOH], 1995).

McAlaney and McMahon (2006) suggest that there are issues which need to be solved to improve information collection. Firstly, there is large disparity in data reported between 2002 and 2003 UK surveys, as a result of defining and reporting binge drinking differently. For example, a GHS survey defines binge drinking as "more than 8 and more than 6" units of alcohol but HSE 2003 defines it to be "8 or more or 6 or more" (McAlaney & McMahon, 2006, p. 355). Measuring alcohol consumption was previously achieved by asking about the heaviest alcohol use over the last week or average units consumed and was identified to be the best method (Cabinet Office, 2004). The method was criticised by questioning if the heaviest day within a week is defined, how can the consumption during the rest of the days be identified (McAlaney & McMahon, 2006). The alternative, offered by McAlaney and McMahon (2006), was a study in which participants were asked about their behaviour during every single day within a week measured by Adult Drinking Patterns in Northern Ireland Survey (Health Promotion Agency, 2003), which makes it possible to measure binge drinking rather than the heaviest day only. The study found inconsistencies in reporting data which should be treated with caution as no standardised measures are adopted across surveys (McAlaney & McMahon, 2006).

2.3 Psychological Theories

2.3.1 Theory of planned behaviour. The theory of planned behaviour (TPB) (see Figure 2.1) has been shown to predict a number of health behaviours including alcohol misuse (French & Cooke, 2012). The theory assumes attitudes towards behaviour and subjective norm predict intention formation which predicts behaviour (Ajzen, 1985). Another construct which is perceived behavioural control (PBC) is known to be directly linked with the behaviour. In relation to alcohol consumption, the theory explained 35% variance in men and 41% in women (Zimmermann & Sievering, 2010). However, PBC has shown contradictory results in the literature, being either positively or negatively related to binge drinking (Norman & Conner, 2006; Johnston & White, 2003). Among student population subjective norm, being approved by the particular group or groups' approval of one's drinking predicted their intention to drink, and intention predicted behaviour (French & Cooke, 2012).

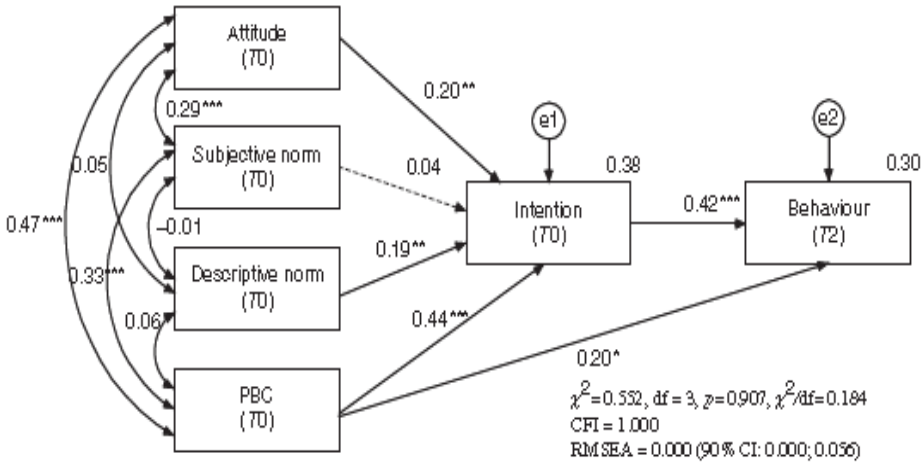

Figure 2.1. Path model for theory of planned behaviour.

Reprinted from "A longitudinal application of three health behaviour models in the context of skin protection behaviour in individuals with occupational skin disease, "by U. Matterne, T. L. Diepgen and E. Weisshaar, 2011, *Psychology and health, 26,* p. 1197. Copyright 2011 by Taylor & Francis.

2.3.2 Prototype willingness model. The prototype willingness model (PWM) has been used with TPB and predicted a considerable variance when applied to health protective and health risk intentions (Rivis et al., 2011) (see Figure 2.2). Its construct, like previous behaviour and prototype, has been examined in alcohol related research. PWM has predicted 5 % of the variance when combined with TPB (Rivis, Sheeran, & Armitage, 2006). PWM was widely used among adolescents as they are more likely to be effected both positively and negatively with prototype images, though the study by Rivis et al. (2011) showed the opposite. When alcohol consumption was examined in relation to drinking and driving, the model showed a considerable rise in drinking and driving among the older male drivers, aged 30-60 (Rivis et al., 2011). Research by Todd and Mullan (2011) confirmed male students tend to be more affected by prototypes as results were only favourable of the male population as regards prototype perception. A recent meta-analysis by Todd, Kothe, Mullan, and Monds (2016) was in favour of using prototype in the research targeting different health behaviours and underlined the importance of using its components like prototype perception, prototype similarity and prototype favourability separately as each component can add its value to the study. However, the meta-analysis is recent and it is in support of the current research. The decision to use PWM was due to the lack of research at the time when the current research was initiated. In addition, the PWM was not applied much within the older population (Rivis et al., 2011), but mostly adolescents (Spijkerman, van den Eijnden, Vitale, & Engels, 2004).

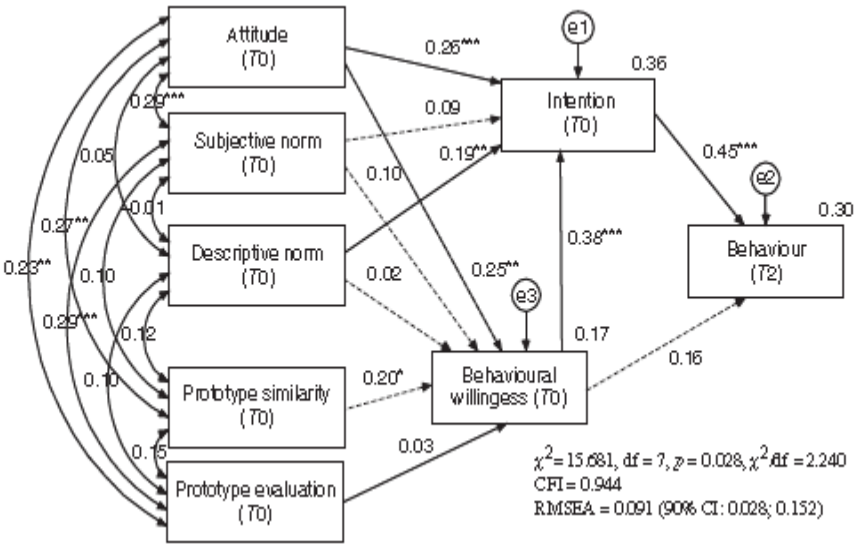

Figure 2.2. Path model for prototype willingness model.

Reprinted from "A longitudinal application of three health behaviour models in the context of skin protection behaviour in individuals with occupational skin disease, "by U. Matterne, T. L. Diepgen and E. Weisshaar, 2011, Psychology and health, 26, p. 1197. Copyright 2011 by Taylor & Francis.

2.3.3 Self-determination theory. According to Deci and Ryan (1985) self-determination theory (SDT) in line with TPB has motivation as a component which affects a person's intention based on his values which forms his future behaviour. The theory includes 2 types of motivation, intrinsic motivation and external regulation. Both of them predict motivation to behave but based on 2 different reasons. Intrinsic motivation is an autonomous form of motivation. It shows the engagement in the behaviour based on highly valued goals which are internally defined. External regulation is the motivation to perform the behaviour in order to avoid punishment or receive a reward. It is formed by external reinforcement.

Self-determination theory was first mentioned in the eighties by Deci and Ryan's (1985) work. They suggest prior work viewed motivation as a 'unitary concept'; people

either can be motivated a lot or have a little motivation to engage in behaviours (Ryan & Deci, 2000, p. 62). They suggested that motivation can be not more or less but have orientation which is defined by the attitudes and goals to get involved with behaviour. For example, a student who is motivated to learn can learn because he values the skill, he values the benefits it might offer. Personal meaning every person puts into the behaviour performance identifies the motivation involved towards the behaviour (Deci & Ryan, 2000). It was suggested that there are two types of motivation: intrinsic motivation and extrinsic regulation. Intrinsic motivation signifies an activity involvement because it is enjoyable and fun while extrinsic motivation is the action people put into an activity because it yields a 'separable outcome' and it can be self-determined and non-self-determined (Ryan & Deci, 2000, p. 60).

Ryan and Deci (2000) suggest motivation exists in continuum, amotivation being on one side of the continuum and intrinsic motivation on the other. There are four types of extrinsic motivation between amotivation and intrinsic motivation. Intrinsic motivation is seen to be the most powerful which defines the type of motivation a person would perform because it is enjoyable and fun. On the other end of the continuum lies amotivation. It is opposite to intrinsic; it is lacking motivation, or a person would only perform a behaviour out of necessity. Extrinsic regulation has two types, non-self-determined (external and introjected) and self-determined (identified and integrated). If the person is performing the behaviour to avoid punishment or to receive a reward, this behaviour is driven by external regulation. Introjected regulation is the motivation to perform certain behaviour to avoid guilt or shame, in other words to avoid negative feelings. Identified regulation was mentioned earlier as self-determined motivation. The person who is getting involved in behaviour because they believe it will help them to achieve their goal is linked to identified regulation.

Integrated regulation is another form of self-determined motivation. Based on this motivation the behaviour will be performed regularly and the behaviour is linked to a person's values.

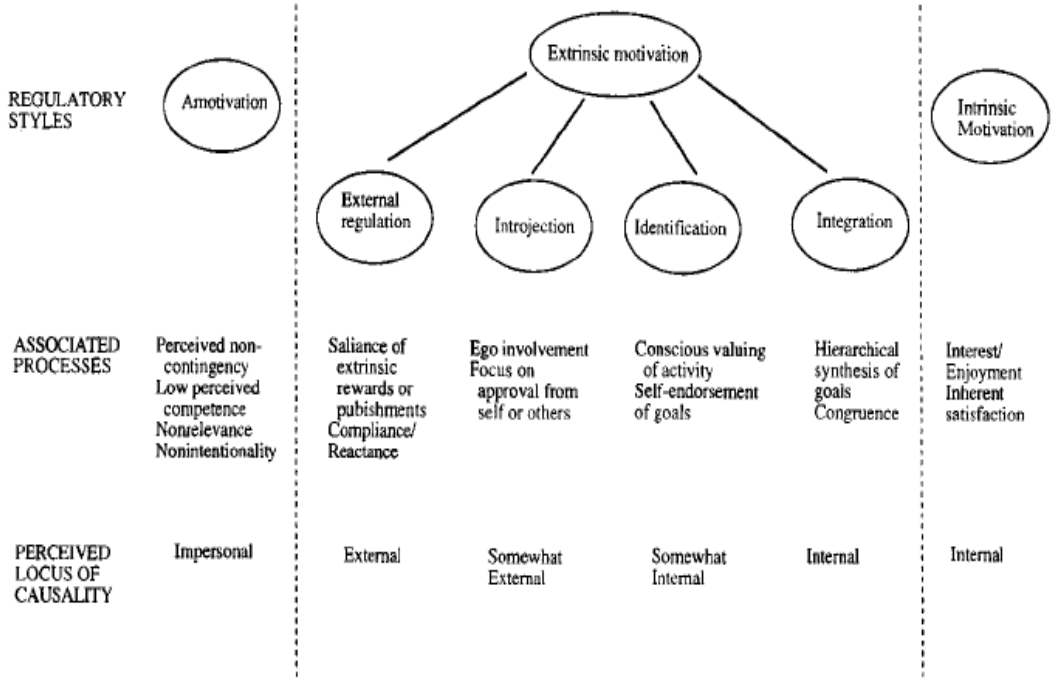

Figure 2.3. A taxonomy of human motivation.

Reprinted from "Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions," by R. M. Ryan and E. L. Deci, 2000, Contemporary educational psychology, 25, p. 61. Copyright 2000 by Academic Press.

Deci and Ryan (2000) state that meeting basic needs for competence, autonomy and relatedness can lead to more self-determined motivation. Examples of this are, when a person believes he is capable and competent in performing the behaviour, when he feels he is responsible for his actions and has choices, and when he is connected with others and understood. The more a person's needs of competence, autonomy and relatedness are met, the more positive outcomes he achieves (Teixeira, Carraca, Markland, Silva, & Ryan, 2012). The idea of introducing 'innate needs' (Deci & Ryan, 2000, p. 231) was based on Skinner's (1953) work, in which he mentioned the need for reward for intrinsic motivation to exist. This can be achieved by making the activity interesting. Hull (1943), with his learning theory,

made a connection of having internal psychological satisfaction to enhance intrinsic motivation, although self-determination theory defined intrinsic motivation as motivation which does not need require reward.

Deci and Ryan (1985) offered another theory called Cognitive Evaluation Theory in which they argue that interpersonal interactions aid in feeling competence which is in the theory assumed to be a driving force, a need which needs to be met. Competence on its own will not be effective in enhancing motivation unless it comes with a sense of autonomy, by an internal locus of causality (IPLOC; de-Charms, 1968). Deci and Ryan (1985) argue that the person should not only be perceived as competent (self-efficacy), but also they must realise that their behaviour is self-determined.

An interesting position of facilitating or undermining of intrinsic motivation was suggested when intrinsic motivation is not considered to be caused but "catalyzed" (Ryan, 2000, p. 58). Self-determination theory assumes that intrinsic motivation, being something that exists permanently, can be catalysed with help of social and environmental factors. This can be facilitating or even undermining to motivation. Extrinsic motivation is described as being a motivation which is performed to achieve some kind of separable outcome. Ryan and Deci (1985) give an example of studying to avoid parental pressure or study because the person knows that it will be a benefit of some kind in the future. Both situations are about receiving and separable outcomes although they are different. Working towards gaining instrumental value is different from intrinsic motivation where the person simply does it for enjoyment.

Internalisation and integrations terms have been introduced which, for example, can be a situation when students are externally motivated and can take in a value and integration is the value becoming their own, thus moving them towards the other end of continuum of motivation (Deci & Ryan, 1985). That is when a person's motivation is moved from

amotivation, not willing to perform the behaviour, to the point when he is personally committed to the behaviour, which is the way to achieve commitment towards the behaviour, persistence and positive self-perceptions (Ryan & Deci, 2000).

Organismic integration theory (OIT) is another sub theory of SDT. It describes if activity is self-determined which makes locus of causality more internal. From Figure 2.3 above it can be seen in activities which are not self-determined, locus of causality can be impersonal. If the activity is partially self-determined, this behaviour is extrinsically motivated. The locus of causality in this case can be completely external and internal (Deci & Ryan, 1985). It can be seen from Figure 2.3 that amotivation is a state which lacks intention to act; the person does not value the activity, and at the same time there is no personal input (Ryan, 1995), when a person feels incompetency to perform the behaviour (Deci, 1975). The person also does not believe it will bring the outcome he expects (Seligman, 1975). Ryan and Deci (2000) mention some theorists treating motivation as a unitary concept (e.g., Bandura, 1986) and they have made a distinction between amotivation and motivation.

Skinner (1953) accepted extrinsic motivation and it was then compared to intrinsic motivation. Introjected regulation is controlling because people perform behaviour to avoid guilt or anxiety ego-enhancements or pride (Nicholls, 1984; Ryan, 1982), in which a person performs to maintain self-esteem, an act in order to enhance or maintain self-esteem and the feeling of worth.

Ryan (1995) reports identification is more autonomous and self-regulated. A person identifies the behaviour to be of personal importance and accepts its regulation as his own. The most autonomous form of extrinsic motivation is integrated regulation. Integration occurs when identified regulation is fully assimilated to the self, thus more extrinsically motivated becomes self-determined. Integrated is very similar to intrinsic and they are both autonomous and unconflicted but it is still extrinsic. It is important to know during a person's

development, with passing years motivation is internalised but it is not necessary that a person goes through each stage (see Figure 2.3); sometimes s/he can adopt behavioural regulation. This continuum surely is related to prior experiences and situational factors.

The reason for combining these two theories is if TPB predicts engagement in the behaviour through beliefs, attitudes, the PBC people possess, the SDT explains the quality of motivation, as there are different types, which lead to behaviour performance (see Figure 2.4). The significant findings have been reported that intrinsic motivation predicted PBC, subjective norm and attitude when applied to exercise behaviour (Hagger et al., 2002). On this occasion, 67.5 % of the variance was explained by 2 theories. In contrast, a study by Hagger et al. (2012) found intrinsic motivation to be a predictor of PBC and attitude but not subjective norm. The study also found significant indirect relation of intrinsic motivation on intention.

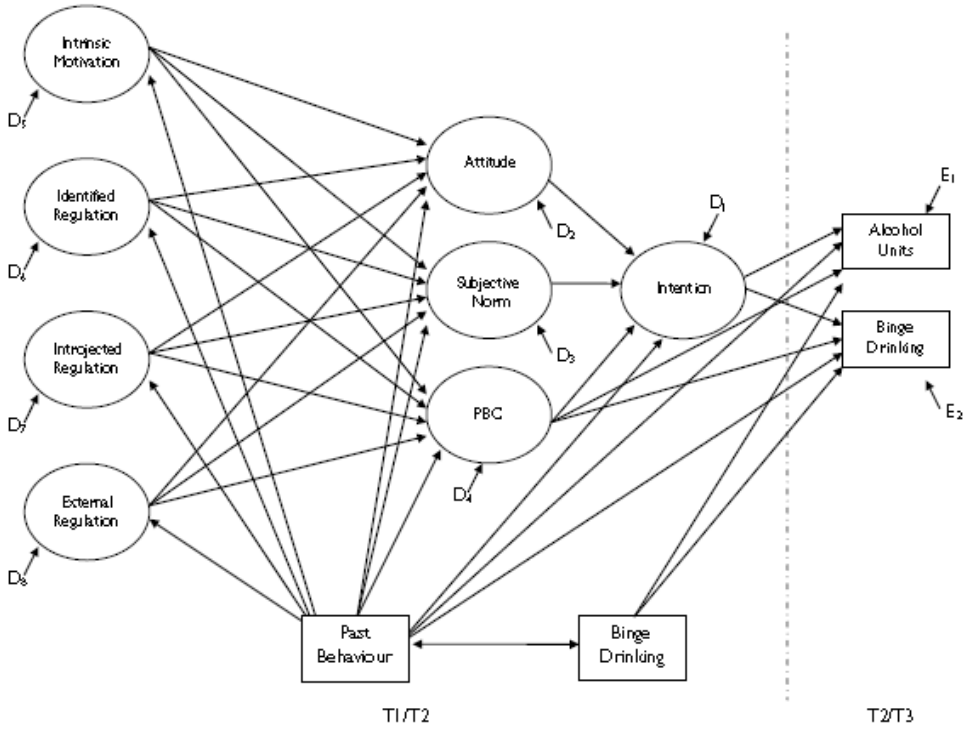

Figure 2.4. Path analytic model predicting alcohol-related outcomes from theory of planned behaviour and self-determination theory variables
Reprinted from "Predicting alcohol consumption and binge drinking in company employees: An application of planned behaviour and self-determination theories," by M. S. Hagger, A. J. Lonsdale, V. Hein, A. Koka, T. Lintunen, H. Pasi, M. Lindwall, L. Rudolfsson & N. L. Chatzisarantis, 2012, *British journal of health psychology, 17*, p. 393. Copyright 2011 by the British Psychological Society.

A meta-analysis of 184 studies by Ng et al. (2012) showed the support in autonomy predicted competence, person's autonomy and relatedness with health behaviour. The constructs provided better need satisfaction, which led autonomous self-regulation to positively interact with people's welfare and physical health. Controlled regulation was not related to need satisfaction. The study found that the autonomous motivation was not directly linked to health outcomes. Perceived competence was a moderator on this occasion (Ng et al., 2012).

Hagger et al. (2012) used both TPB and SDT and found that the autonomous form of motivation predicted PBC and attitudes. Intention was predicted by subjective norm, PBC and attitudes within TPB. Indirect negative relation was observed between identified regulation, attitudes and drinking within both models. Indirect effect was between identified regulation in relation to intention. Identified regulation had a negative effect on binge drinking. Intrinsic motivation was more related to alcohol behaviour; the motives were enjoyment and interest. It can be concluded that identified regulation is the main predictor of alcohol related behaviour and intention. More importantly, identified regulation facilitates the decision making in relation to units consumed, assisting people in keeping their drinking within recommended guidelines.

2.3.4 Social learning theory. In addition to components of the aforementioned theories, a number of studies have investigated alcohol consumption in relation to coping (Corbin, Farmer, & Nolen-Hoekesma, 2013; Sale, Guppy, & El-Sayed, 2005). The results showed age, gender, drinking to cope and alcohol expectancies predicted considerable variance in alcohol consumption (Sale et al., 2005). There was a difference in coping styles used among males and females. For example, accommodation coping and drinking to cope were closely related to the gender. The results of the studies were in line with Social Learning theory (Bandura, 1977) in which drinking is defined as a maladaptive coping behaviour and it is assisted by positive expectancies.

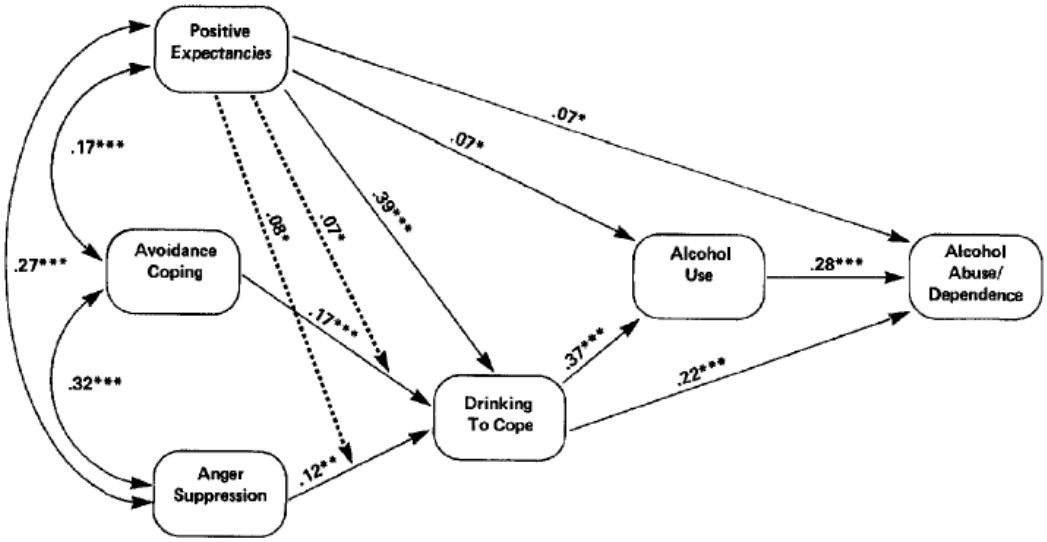

Figure 2.5. Estimated model of alcohol use in relation to drinking to cope, expectancies and emotion focused coping.

Reprinted from "Coping, expectancies, and alcohol abuse: a test of social learning formulations," by M. L. Cooper, M. Russell & W. H. George, 1988, *Journal of abnormal psychology, 97 (2),* p. 220. Copyright 1988 by the American Psychological Association.

Social learning theory (SLT) explains alcohol use from modelling, social reinforcement and cognitive processes. The theory suggests that people acquire drinking behaviour by modelling people around them. Social reinforcement is approval or disapproval of the behaviour. The consequences of the behaviour, for example punishment received, may affect a person's decision to perform the behaviour or not to perform (Bandura, 1977).

Borsary and Carey (2006) explored the peer influence, the quality of social bond, in relation to the behaviour. The results showed that there can be 3 pathways in alcohol use which are linked to social learning. These are: poor peer relationships which leads to isolation and alcohol is used to cope; quality peer relationships in which alcohol is approved and consumed to have a good time with peers and thirdly, reducing alcohol use by a valued peer encouraging less alcohol use. In addition, from the behaviour perspective, the construct

alcohol consumption as a coping mechanism has been looked into by a number of studies (Britton, 2004; Cooper & Russell, 1988). Also from the cognitive part of SLT, positive alcohol expectancies have been shown to accelerate alcohol use, as well as self-efficacy showing significance in young adults (Moltisanti, Below, Brandon, & Goldman, 2013).

From these studies it is suggested that the prediction of drinking using TPB and PWM will be improved by adding SLT constructs (Borsary & Carey, 2006). Furthermore, Borsary and Carey (2006) and Ennett et al. (2008) have emphasised the importance of longitudinal designs in assessing the prediction of drinking behaviour. Measuring changes in constructs over time and assessing how such changes influence changes in drinking behaviour allows stronger judgement regarding causal relationships.

In addition to the meditational effects hypothesised by the above models, researchers have suggested the role of certain moderating variables in the prediction of drinking behaviour. Gender served as a moderator within research undertaken using PWM and TPB (Todd & Mullan, 2011). Neighbors, Lewis, Bergstrom, & Larimer (2006) suggested that controlled orientation moderated the impact of normative feedback on problems but not consumption. Finally, past alcohol consumption was a moderator in the model suggested by Hagger et al. (2012). Thus exploration for the moderating effect of a limited number of variables such as these may be advantageous in the current research.

2.4 Application of Several Theories in One Study

2.4 1 Theory of Planned Behaviour and Prototype Willingness Model. The theory of planned behaviour and the prototype willingness model have been applied to a context of substance use (Andrews & Peterson 2006; Spijkerman et al., 2004). Spijkerman et al. (2004) used TPB and PWM in exploring the behaviour of Dutch adolescents. According to the results, prototypes of smokers and drinkers related to adolescents' willingness to smoke and

drink. Regression analysis revealed that a prototype of weekly-drinking peers predicted 15% of the variance in willingness and 16% in intention to drink. In relation to prototypes when combined with TPB, results showed smoking presented that the prototypes, attitude, perceived subjective norm and perceived behavioural control explained 42% of the variance in willingness and 44% of variance in intention. In relation to drinking, prototype and TPB explained 33% variance in willingness and 36% of the variance in intention. The following variables showed positive relations between attitudes, perceived subjective norm, and willingness or intentions to smoke or drink, and negative associations found between PBC, willingness and intentions to smoke and drink. Smoker prototypes and perceiving the peers to be well adjusted, rebellious and cool were related to willingness and intention to smoke. Drinker prototypes, perceiving weekly-drinking peers as rebellious and cool, were related to willingness and intentions to drink (Spijkerman et al., 2004)

Andrews and Peterson (2006) examined the TPB and PWM perceptions of adolescents from 1st grade to 8th in relation to cigarette, alcohol and marijuana users and found that prototypes were more positive among middle school students fourth and fifth grade. By grade 6 and 8 it increased again as adolescents had more positive perceptions of cigarette, alcohol and marihuana users. They found gender differences in prototype perception as girls had more positive prototype perception of alcohol users than boys. The girls showed lower intention to drink and lower prevalence of alcohol use until the 4th grade but by fifth and eighth grade the prevalence was the same between genders. The authors argue that there is a social aspect which contributes to more a positive image girls hold as they are more concerned about rejection by friends (Bernt, 1982).

Andrews and Peterson's (2006) interventions could be set to change children's perceptions, negate the positive image of substance users and show the positive sides of non-users. This can be done to prevent an increase in the positive image of substance users which

was found to be the 5th grade when there was an increase. The messages can be tailored according to the gender. For example, girls are more concerned about popularity and boys about being exciting and cool. There are age and gender differences in early adolescents in relation to motives which explains the findings of Andrews and Peterson's (2006) study which is in line with Kuntsche et al. (2006). More detailed information about the study is provided later in the chapter.

The theory of planned behaviour came to the centre of attention and discussion (Ajzen, 2011) inspiring criticism (Sniehotta, Presseau, & Araújo-Soares, 2014) and debate (Ajzen, 2014; Trafimow, 2014; Conner, 2014; Hagger, 2015). Ajzen, (2011) argues that several factors were contributing to its predictive validity. For example, it was mentioned that the measures used for the theory very rarely show the reliability more than .75 and .80 and the studies with the less reliable measures were included in meta-analysis performed. Ajzen (2011) also discusses the fact that intention and behaviour relations can be affected by the intervals between the assessments. For example, shorter intervals, six weeks or less, showed better prediction utilities of intention–behaviour relations rather than long breaks between the assessments. Intention and behaviour relations was also due to the PBC people have which reduces the predictive validity of intention (Kor & Mullan, 2011). TPB is concerned about predicting intention. Poor intention and behaviour associations might be due to the fact that reasoned action is reaching its limit. There are factors other than PBC that contribute to the intention behaviour relation.

Ajzen (2011) highlights the criticisms about the theory being too rational and not adding any cognitive or affective processes. The author accepts the TPB's concern about goal-directed and steered by conscious self-regulatory processes, but it does not mean beliefs and attitudes are formed in an unbiased environment and reflect the reality. The affect and emotions enter in two ways. Firstly, positive or negative mood can be a reason for the

participants to choose beliefs more favourable in good mood and less favourable when in a bad mood (Forgas, Bower, & Krantz, 1984; Johnson & Tversky, 1983). Secondly, participants are more likely to choose beliefs which are readily accessible in the memory, being in particular affective state (Clark & Waddel, 1983; McKee, Wall, Hinson, Goldstein, & Bissonnette, 2003).

Ajzen (2011) evaluated the research on PWM and argues that the PWM assumes that there are 2 pathways to engaging in behaviour. Different to TBP there is a second path within PWM which is about spontaneous involvement. He argues that the TPB does not suggest that the person who is involved in the behaviour considers all the possible options before involving themselves in the behaviour. Rather, adding a spontaneous side to PWM is a misunderstanding of reasoned action, which implies that the TPB does accept behaviour can be spontaneous and its components attitudes, subjective norm and perceived behavioural control, intention are assumed to guide the behaviour, without cognitive effort or often below conscious awareness (Ajzen & Fishbein, 2000).

Fishbein and Ajzen (2011) also propose that the empirical evidence does not support the predictive power of willingness. They suggest measures which were used to measure the willingness are similar to the intention measures. Similarly, a study by Matterne, Diepgen, and Weisshaar (2011) used TPB and PWM for skin protective behaviours and found that intention predicted behaviour ($r=0.49$) better than willingness ($r=0.36$).

According to Rivis et al. (2011) prototype similarity contributed to the variance added to intention which was 6% whereas PWM suggests that prototype similarity should have a direct effect on the behaviour. The question which was employed for the study was similar to the one for self-reported measure. Ajzen (2011) reasons that since the introduction of TPB, a huge number of research has been conducted to improve the predictive validity of the theory: impulsivity, motives, individual differences in addition to studying personality traits and

depression. One of the factors, willingness, and social support seem to go beyond the TPB and factors like habit formation and background factors can enrich the model.

2.4.2 Theory of planned behaviour and self-determination theory. The theory of planned behaviour and self-determination theory have been applied in health behaviours. Although there are a number of studies combining these two theories, most of them are on exercise behaviour (Chatzisarantis, Hagger, & Smith, 2007; Chatzisarantis & Biddle, 1998), with only a few on other health behaviours (Hagger & Chatzisarantis, 2009). Up to the present there are two publications by Hagger et al. (2012) and by Caudwell and Hagger (2015) targeting alcohol use with company employees and students. More research needs to be conducted, with cross-lagged data. In addition, different models can be checked for their fit but it is necessary to provide theoretical justification for them (Hagger & Chatzisarantis, 2009).It would be preferable to identify causal effects, and structural equation models would make it possible to identify moderators and mediators as was suggested by previous research (Hagger & Chatzisarantis, 2009). Therefore, the current research is adopting the abovementioned theories within alcohol consumption in a longitudinal study and within students from one university (Caudwell & Hagger, 2015; Pickard et al., 2000).

2.5 Exploration of Personality Traits and Motives to Drink in Empirical Research

2.5.1 Impulsivity. Impulsivity has been shown to be a contributing factor towards alcohol use. Previous research has investigated impulsivity and would suggest that it is a multi-dimensional construct, which consists of choice impulsivity, and response impulsivity (Potenza & De Wit, 2010). The research in this area seems to be complicated due to impulsivity being multi-dimensional (Stautz & Cooper, 2013; Coskunpinar, Dir, & Cyder, 2013). A study by Stautz and Cooper (2013) conducted a meta-analysis of the research on impulsivity in adolescents and was published in December 2012. All traits of impulsivity

showed that the relations to alcohol use and the effect sizes reported were r=.28 and r=.27 for sensation seeking and positive urgency. Problematic alcohol use was linked to positive and negative urgency mean effect sizes of r=.32 and r=.31. Sensation seeking and positive urgency showed the largest mean associations with alcohol consumption and positive and negative urgency were shown to have the largest associations with problematic alcohol use. The study confirmed similar results when it was checked against older populations. Sensation seeking predicted alcohol use while urgency traits were associated with problematic alcohol use (Stautz & Cooper, 2013). Another study by Coskunpinar et al. (2013) conducted a meta-analysis in which impulsivity traits were checked against frequency of drinking, alcohol dependence and alcohol problems, and binge drinking. In relation to frequency, impulsivity traits were not significantly different. The effect sizes range from r=0.21 for lack of planning and r=0.28 for lack of perseverance. Positive urgency and frequency associations could not be examined. The strongest effects for alcohol dependence were due to negative urgency r=0.38 and lack of planning r= 0.37 which was different from Sautz and Cooper's (2013) research, in which positive urgency was also related to problematic alcohol use. The largest effects reported for alcohol related problems were negative urgency r=0.34 and positive urgency r=0.34. Sensation seeking had the strongest effect associated with binge drinking. It can be concluded that impulsivity traits are strongly associated with alcohol use.

Although there were studies conducted in relation to alcohol consumption and impulsivity, there are only few studies addressing the need to improve the utility of TPB by adding impulsivity in health behaviours (Churchill, Jessop, & Sparks, 2008; Churchill & Jessop, 2011). A study by Churchill et al. (2008) combined TPB and four dimensions of impulsivity (urgency, lack of premeditation, lack of perseverance, and sensation-seeking) to explain avoidance of high calorie snacks. The study participants consisted of 315 adults. The results showed that impulsivity (urgency) contributes to high calorie snack consumption.

People who score highly in urgency tend to snack more when they are distressed. The results also showed that the relationship between urgency and behaviour was not moderated by intention. The study was supported by another piece of research by Churchill and Jessop (2011) in which, in addition to impulsivity, self-control was added. Both components showed a significant contribution to snacking behaviour. Participants with high impulsivity were likely to snack more and those with high self-control showed avoidance of snacking. There are no studies in which impulsivity has been used in line with TPB to predict alcohol use; in the current study, impulsivity was included. Alcohol use is seen as a behaviour which does not require conscious decision making but, instead, results from a more spontaneous process (Oei & Baldwin, 1994). For this reason motor impulsivity was selected as a measure in the current research.

2.5.2 Extraversion, neuroticism and drinking motives. Kuntsche et al. (2006) reviewed drinking motives in relation to age, gender, personality traits and contextual issues. The aim was to explore the aforementioned, as it would be necessary knowledge in order to plan effective intervention or conduct tailor made interventions. Enhancement motives and coping motives were related to heavy drinking patterns. In addition, coping motives were related to alcohol-related problems. The authors argue that in addition to drinking motives, socio-cultural motives are affecting peoples' drinking patterns, and drinking motives on their own do not provide a full explanation (Kuntsche et al., 2006).

A review of research carried out over the last 15 years allowed for a concise exploration of the motives in relation to gender, culture, drinking in different contexts, personality traits considering culture and changes over lifetime. Meta-analysis included articles; the participants' age range was 10-25 (Kuntsche et al., 2006). In relation to age, the older the children the more drinking motives they had. For example Webb, Getz, Baer, and McKelvey (1999) reported that 5th grade pupils had 1 drinking motive and 6th graders had 2.

The motives started emerging in adolescence. There were no differences in motives found among 13 and 14-year-old pupils when they were observed for gender differences. Boys at 18 and 19 had stronger enhancement and social motives than girls (Cooper, 1994; Jerez & Coviello, 1998). The review found 13-19 year-old girls scored higher than boys aged 13-15, Cooper (1994) found the opposite in late adolescents. Several studies on college students reported no difference in coping motives among college students with a mean age of 18 – 21 (Carey & Correia, 1997; Nagoshi, Nakata, Sasano, & Wood, 1994; Stewart, Loughlin, & Rhyno, 2001; Wild, Hinson, Cunningham, & Bacchiochi, 2001). Gire (2002) reported higher scores in coping motives in men than women (sample mean age 23 years).

The changes over time were only reported by one study (Palmqvist, Martikainen, & vonWright, 2003), which was conducted over 15 years. Over the years, coping motives such as drinking to cope with bad feelings or to relieve stress or to avoid social rejection decreased and the enhancement motives such as drinking to feel good/ to get drunk/ just for its own sake increased. Although the current study does not include motives, it is envisaged that qualitative research would assist in explaining motives behind students' drinking, so it is important to know the change in motives over the years. It will assist in defining attitudes and beliefs in relation to the motives held at different stages of life by both males and females.

Interesting findings have been reported on motives in relation to personality traits. In the literature, studies mention that incorporating and drawing lines between personality traits and drinking motives vary as, according to personality type, the motives differ (Cooper, 1994; Stewart & Devine, 2000). The personality factors which have been studied are the following: sensation seeking and low inhibitory control, dimensions of the five-factor model of personality, anxiety sensitivity, and other personality-related factors.

Enhancement motives are the motives to accelerate a positive state, for example people engage in the behaviour of drinking because it is fun and exciting. Enhancement

motives were associated with sensation seeking (Comeau, Stewart, & Loba, 2001; Cooper, Frone, Russell, & Mudar, 1995). In addition, enhancement motives were associated with low inhibitory control (Colder & O'Connor, 2002), and low suppression of aggression (Weinberger & Bartholomew, 1996). In a study by Cooper, Agocha, & Sheldon (2000) impulsivity positively correlated with enhancement motives. However, impulsivity was not significant when extraversion and neuroticism were added into a multivariate regression.

The five-factor model of personality is a personality construct which helps identify personality in relation to its emotional, interpersonal, experiential, attitudinal, and motivational styles (McCrae & John, 1992). High extraversion, low conscientiousness, high neuroticism, and low agreeableness in this model were shown to be related to specific drinking motives. It was mentioned that extraverts are more sensitive to positive stimuli and tend to be motivated by enhancement motives (Gray, 1982; Stewart & Devine, 2000). People who consume alcohol to enhance their positive emotional state tend to be scoring low on conscientiousness (Loukas, Krull, Chassin, & Carle, 2000; Stewart & Devine, 2000; Stewart, Loughlin, & Rhyno, 2001; Theakston, Stewart, Dawson, Knowlden-Loewen, & Lehman, 2002).

Low conscientiousness has been defined as low responsibility, dependability and will to achieve. (Loukas et al., 2000; Stewart & Devine, 2000; Stewart et al., 2001; Theakston et al., 2002). Participants of research who have low self-discipline and low deliberation are more likely to engage in short–tern incentive activities without considering long-term consequences (Stewart et al., 2001).

Drinking to cope with low emotional states is associated with high levels of neuroticism. Neuroticism refers to emotional liability, hypersensitivity to criticism, self-doubt and a tendency to dwell on the negative (Cooper et al., 2000; Loukas et al., 2000; Stewart & Devine, 2000; Stewart et al., 2001). Neurotic people are sensitive towards the experiences of

a negative nature and they may release those feelings with the use of alcohol. Steward et al. (2001) found alcohol use to be one of the maladaptive behaviours neurotic individuals adopt. Neuroticism was correlated with social (Stewart & Devine, 2000) and enhancement motives (Cooper et al., 2000). Loukas et al. (2000) found that, when coping motives were entered into the equation, only coping motives remained significant.

Low levels of agreeableness showed to be related to hostility, self-centeredness and indifference to others, and the experience of interpersonal conflicts (Suls, Martin, & David, 1998) and violence (Heaven, 1996). Thus, it is argued that people may use alcohol to cope with the elevated levels of social distress they encounter (Loukas et al., 2000). Openness was not related to drinking motives (Stewart & Devine, 2000; Stewart et al., 2001).

People with high levels of anxiety sensitivity drink for coping with negative emotional states (Comeau et al., 2001; Stewart & Zeitlin, 1995; Stewart, Karp, Pihl, & Peterson, 1997; Stewart, Zvolensky, & Eifert, 2002). In contrast, students with low anxiety sensitivity drink for social and enhancement reasons (Comeau et al., 2001; Stewart et al., 1997). Females with high anxiety sensitivity are more likely to drink for coping reasons than men (Stewart & Zeitlin, 1995). The authors argue that adolescents with anxiety will be more inclined to drink in order to avoid the anxiety symptoms (Stewart et al., 2002).

In addition, the students with negative views of their own self scored higher on coping motives (McNally, Palfai, Levine, & Moore, 2003). Male college students' coping motives correlated with alienation (Bradley, Carman, & Petree, 1991), frustration, despair, and social isolation in the sense of being rejected in social relations (Jessor, Graves, Hanson, & Jessor, 1968). Depression was reported to be strongly related with coping motives in Stewart and Devine (2000). Similar findings emerged in a study by Windle and Windle (1996).

From the literature reviewed it can be observed that there are differences in the drinking motives of adolescents and young adults. On the one hand, there are the ones who

drink for enhancement and they tend to be more extraverted, aggressive and impulsive. They tend to drink for sensation seeking and have low inhibitory control, low responsibility and a low will to achieve. There is also another type who is neurotic with negative views about his or her own self and has a low level of agreeableness.

The authors argue that external motives (social motives: external, positive; conformity: external, negative) are less relevant to personality factors because they are context-dependent and less stable over time (Cooper, 1994; Stewart & Devine, 2000). Indeed, associations between personality factors and social or conformity motives tend to be weak and were not significant when statistically controlled or when enhancement and coping motives (Loukas et al., 2000; Stewart & Devine, 2000; Theakston et al., 2002) were taken into account.

Situational context was reported in one study (Cooper, 1994). The results of the research showed that social drinkers drank more frequently at mixed-sex parties, in bars, with family members but not at home. Enhancement drinkers drank with same-sex friends, at friends' homes and in bars. Coping drinkers drank at home but not at parties or with their family.

Cooper's (1994) study explained 8.1% of variance, which was defined by the various patterns of alcohol intake in relation to the situations people were in. For example, circumstances, location, day of the week, group size, type of relationship, local norms and residence were all significant factors. However, the reasons for drinking were not explored in that particular study.

Drinking context and drinking motives were shown to be relevant (Cooper, 1994; Kairouz, Gliksman, Demers, & Adlaf, 2002). The fact that social drinkers drink only in a social context demonstrates the discreteness of drinking motives. The meta-analysis showed that culture is also embedded into the drinking motives as drinking motives differed in

accordance with the culture. Although there was no difference observed between different ethnic groups within the country, authors report that social motives were dominant in collectivist countries like Nigeria vs. United States. The places in which there were social activities and social opportunities, peer pressure to drink affected the persons drinking (US vs. Japan). Freshmen in the US were affected by social modelling; peer pressure and easy availability of alcohol encouraged students to drink more frequently (Baer, 1994). Also the particular residence setting played a big part in the students' drinking pattern (Baer, 2002). In addition, there is a difference in drinking motives such as enhancement, coping, social, and conformity.

Several recommendations have been offered by the researchers for prevention using motives. The first to be considered is the relation between drinking motives and drinking situations (Cooper, 1994) and this can be linked to drinking motives (Cox & Klinger, 1988). The second reason why it might be used for prevention purposes is that drinking motives vary according to personality types and motives are culture-specific (e.g., Cook, Young, Taylor, & Bedford, 1998; Kjaerheim, Mykletun, Aasland, Haldorsen, & Andersen, 1996; Vollrath & Torgersen, 2002) and consistent during the life-span (e.g., Gotham, Sher, & Wood, 1997; McCrae et al., 2002). The third point is that drinking styles and the particular drinking motives are culture-specific (e.g., Gire, 2002; Nagoshi, Nakata, Sasano, & Wood, 1994). Drinking motives are related with gender-specific drinking patterns and these are linked to the problems from early adolescence to early adulthood. The results of a systematic review by Kuntsche et al. (2005) demonstrated the importance of considering drinking motives for the adolescent and older population. Targeted prevention programmes on motives for the high risk adolescence group (Stewart et al., 2005) are likely to be more effective than programs targeted at the general population (Gottfredson & Wilson, 2003)

There is a need to include personality and motivational factors in preventive program that target adolescents (Stewart et al., 2005). The argument put forward is that by learning the needs of a particular population, by identifying the needs of particular individuals, and the needs alcohol serves in their case, the preventive programmes can be effectively designed (Cooper, 1994; Miller, 1996). The review shows that the difference in gender and age is significant and the preventive programmes can be tailored accordingly. For example, attention to drinking motivation in general is relevant in late childhood, social and enhancement motives in early adolescence and coping motives in late adolescence and early adulthood (Kuntsche al., 2006). The following recommendations have been suggested by Kuntsche (2006): tailor made programmes should target adolescents, extravert sensation seeking boys who drink for enhancement motives and neurotic, anxious girls who drink for coping motives.

2.6 Interviews and Focus Groups

Interviews are used to gain understanding from an individual's perspective about the phenomenon and it is a good tool to maintain confidentiality (Grønkjær, Curtis, Crespigny, & Delmar, 2013) while working on sensitive topics. Focus groups are commonly used to generate more discussion and are known to be less time-consuming (Krueger & Casey, 2000). The number of participants usually selected for a qualitative study depends on reaching the level of saturation point, until no new contribution is made (Maykut & Morehouse, 1994), which is normally a minimum of 25 people (Douglas, 1985). Qualitative research can be a complementary part of mixed methods research and it can be conducted with a small number of participants (Teddlie & Tashakkori, 2009).

Using interviews and focus groups within a mixed methods study will provide more comprehensive understanding of the topic explored (Creswell & Plano Clark, 2007).

Applying only one either qualitative or quantitative method will not provide the similar depth to the research and the results of a qualitative approach will provide information about phenomena within a specific population and environment (Creswell & Plano Clark, 2007). The research will benefit from a qualitative element which will assist in defining factors that cannot be achieved with an exclusively quantitative study (Lee & Rowland, 2015). It was suggested that to explore behaviour it is advisable to explore it at different levels (e.g., micro and macro) so as to identify the factors influencing the phenomena (Michie, Atkins, & West, 2014; Straus & Corbin, 1998; Sudhinaraset, Wigglesworth, & Takeuchi, 2016). Michie et al. (2014) stress the advantage of thorough investigation of behaviour with all possible means (focus groups), although they acknowledge the time constraints in doing so.

2.6.1 Interviews. "The interview is the art of questioning and interpreting the answers" (Qu & Dumay, 2011, p. 243)**.** Individual interviews are recommended for communicating sensitive topics as they allow for confidentiality to be kept more effectively than focus group interviews (Edmunds, 1999). The most common way of questioning is the semi-structured interview, which belongs to the localist view. Here, the questions are carefully selected and there are space and flexibility for the interviewee to reveal some interesting information as the intention of a localist view is to create the interview situation (Qu & Dumay, 2011). Whereas in the Romanist view unstructured interviews are used and the data collected depends on how much the interviewee is willing to reveal. Another difference between the Romanist and localist view is that Romanists regard the data "as a mirror of reality" and do not take into account contextual factors like political, social and environmental circumstances (Qu & Dumay, 2011, p. 242). Structured interviews are influenced by the neopositivist view and structured questions are used to increase generalisibility of research (Qu, 2011), which is not the main function of the qualitative research (Golafshani, 2003).

Alcohol consumption was researched with the use of interviews in a study by Van Wersch & Walker (2009) which explored drinking using Straus and Corbin's (1998) grounded theory. The core category emerged was "binge drinking as a social and cultural phenomenon" (Van Wersch & Walker, 2009, p. 126). The approach offered a broader understanding of the drinking culture. Contextual conditions include the social side. Action/interaction, consequences and causal conditions are attitudinal aspect. Intervening conditions reflect intrapersonal influences. All of them were found to be contributing to the behaviour. The approach used in the study was found to be effective in explaining the micro-level, which is the level of interaction between individuals, and the macro-level national and international influences (Straus & Corbin, 1998). This idea is supported by Michie et al. (2014, p. 35): "Behaviours are part of a system - they do not occur in isolation" and the environment needs to be taken into account when interventions are developed and behaviour is investigated. In addition, interviews showed to be an effective way to conduct formative assessment in combination with quantitative assessment on behaviour. de Visser et al. (2015) employed interviews as a part of multi-phased intervention development research to identify strategies young people used to manage opportunities to drink, the findings of which further down the line were used to guide educational videos.

Thirty-two participants took part in the interviews conducted by Van Wersch and Walker (2009) with the age ranging from 22 to 58. Grounded theory was used to analyse the data. The participants viewed drinking as a way to socialise, it was a way to make a distinction between leisure and work. In most instances, drinking was seen to be a social norm. Most of the participants saw drinking as a social event. Drinking alone was seen as something pointless. The subthemes were arranged under the following categories: action/interaction, causal conditions, intervening conditions, contextual conditions and consequences. Action/interaction comprised positive experience and negative effect, the

participants reported the downside of drinking was to have a hangover and the positive experience increased confidence, led to a relaxed mood, a reduction of inhibition, and resulted in people being more sociable and less sensible than normal. Causal conditions were about having positive associations of binge drinking, positive personal effect (relaxation) and escapism. Intervening conditions were about self-presenting a desirable self-image (Van Wersch & Walker, 2009). Age was another factor which affected drinking, as for young people the reasons to get drunk would be excitement, increased confidence, novelty and confidence with members of the opposite sex, and for older people drinking was not socially acceptable or cool anymore. Getting married and having children meant cutting down on drinking due to increased responsibilities and many more themes emerged under intervening conditions.

Van Wersch and Walker (2009) reported that familiarity with people and enjoyment of the occasion was a subtheme under contextual conditions. People who were with unfamiliar people around drank to come out of their shell. In addition, location, other people's drinking behaviour and mood seemed to be a factor which would fit contextual conditions. Consequences included the following subthemes: action taken in response to the situations, harm minimisation, negative minimise positive predominate and binge drinking normalised. The conditional matrix developed for "binge-drinking as a social and cultural phenomenon" is about linking and observing the interaction of conditions and allows learning about micro and macro level factors influencing the phenomenon. Different to quantitative findings of previous research (Kuntsche et al, 2005) qualitative data provided a non-linear interaction between conditions and more in-depth understanding of each category and factors (Van Wersch & Walker, 2009).

It is aimed to use interviews as the best tool to ensure the participants' anonymity and confidentiality on a sensitive topic. It is anticipated that the interviews will provide

information on contextual/environmental as well as attitudinal and intrapersonal factors, which will assist in creating a comprehensive picture of alcohol use among students.

2.6.2 Focus groups. Focus groups are known to be providing information about the perceptions, feelings and thinking of people about issues, services or opportunities (Kruger & Casey, 2000). After obtaining the necessary information, "the focus groups are used to gain understanding about the topic so decision makers can make more informed choices" (Kruger & Casey, 2000, p. 12). It has been recommended as a useful tool for using in mixed methods and for triangulation in research (Webb, 1981). Literature suggests that by increasing the group size of focus groups (from 4 to 8) the number of ideas does not increase and it was advised to use groups of strangers as opposed to groups of people who are acquainted with each other (Fern, 1982). The flexibility focus groups provide makes it more attractive to the researcher (Morgan & Spanish, 1984). The participants in focus groups are usually selected based on in-depth knowledge they have about the issue. Another advantage of focus groups is that they create less bias as the moderator does not lead the discussion as much as it happens during interviews (Doyle, 2004).

Focus groups were previously used to explore the phenomenon from the point of view of staff or policy makers (Kruger & Casey, 2000; Lear, Weinstein, Smallwood, Satterfield, & Propsom, 2014). It provides a dynamic environment for participants to share ideas and assist in idea generation (Kruger & Casey, 2000). Although focus groups have their limitations, for example one person can influence the answers of the group participants, it is a quick and less time-consuming way to generate data. It is recommended to conduct two or more focus groups as research which uses single focus groups is rare (Edmunds, 1999). Although focus groups were described to provide "the best of both worlds" compared with observations and interviewing, it must be said that they, too, haver their limitations. For example, there is a lack of control over the discussion, and the setting in which they are usually organized may

be rather unnatural (Morgan & Spanish, 1984). In spite of these limitations, Morgan and Spanish (1984) believe that the advantages outweigh the disadvantages.

Qualitative studies have been conducted in order to identify the attitudes and beliefs of the staff who are involved in the interaction with young people (Lear et al., 2014), the effectiveness of interventions (Snow, Wallace, Staiger, & Stolz-Grobusche, 2003), the use of screening tools to reduce alcohol use among young people (Gordon, Ettaro, Rodriguez, Mocik, & Clark, 2011), and the students' perceptions of sensible drinking behaviour (Barry & Goodson, 2011; Howard, Griffin, Boekeloo, Lake, & Bellows, 2007).

Research by Lear et al. (2014) investigated faculty and staff alcohol use and their perception and attitude about students' drinking. The authors identified some discrepancies with regard to the perception of faculty members and administrators as they were interacting in a different way with students. Importantly, it was reported that there was not much communication about alcohol consumption between students and staff. There are some misperceptions within tutors about their students' alcohol use. The authors recommended addressing the issue of misconception in line with the social norming. The research suggests it would be advisable to increase the knowledge of faculty members and administrative staff in order to reduce excessive and high-risk alcohol consumption among students. A study by Nehlin, Fredricson, Gronbladh, & Jansson (2012) supports the idea of importance of staff attitude for the implementation of effective alcohol strategies in such settings.

It is recommended that by introducing interventions and by setting up policies and procedures in a given setting, the behaviour can be changed (Snow et al., 2003). Snow et al. (2003) defined the factors which are leading to harmful alcohol use amongst students. They believe that setting up alcohol-related policies will be appropriate to reduce excessive drinking behaviour, though most of the participants in the research reported drinking to be a personal choice rather than something to be monitored. The authors agree on alcohol

consumption behaviour being challenging. Even if it is regulated within the university setting, students can get easy access to the beverages outside university.

Research by Gordon, Ettaro, Rodriguez, Mocik, & Clark (2011) explored screening for alcohol use of young people. The results indicated it is difficult for young people to open up about their alcohol consumption. In addition, the lack of screening tools and practitioners' knowledge make it difficult to identify excessive alcohol consumption. The research suggests online tools would be appropriate as they will define excessive alcohol consumption, keep the information confidential making it easier for young people to report about their behaviour, and online tools will inform young people about the negative consequences of drinking above safe limits. Although online tools are effective in educating young people, research by Carey, Scott-Sheldon, Elliot, Bolles & Carey (2009) showed females respond to counsellor-administered intervention better, whereas men tend to respond equally to online and counsellor-administered intervention. Low motivation would favour counsellor-administered interventions (Carey et al., 2009).

Howard et al.'s (2007) study explored the ways to stay safe while consuming alcohol. Focus groups have been organised with the college freshmen and defined the strategies used by the students to stay safe, for example caretaking when a friend is drunk and meeting students' information needs. Important information helped formulate strategies. Students mentioned the following: 1 person staying sober, planning where to go after the party in advance and how to get there, eating before drinking, setting limits for alcohol to be consumed, and drinking only at weekends would help them stay safe. With regard to looking out for each other, staying with the same group, girls relying on the guys to keep them away from unsafe situations, watching the group members' amount of alcohol consumed – these were all reported to be effective strategies. The students' need for information concerned alcohol laws, skills to define if a friend is drunk, knowledge of the effect of alcohol on the

body, skills to take care of a drunk person and skills to stop a person from drinking if she/he had too much to drink. The article draws the following conclusions: students have the strategies to cope with consequences of alcohol. Students are happy to be educated on the strategies and skills to stay safe, to know not only how to abstain from drinking but how to drink sensibly and take care of themselves and friends.

A study by Barry and Goodson (2011) aimed to define what responsible drinking means for university students. The result showed the emergence of seven themes. Although the focus groups were about drinking responsibly, some of the beliefs participants expressed showed to be harmful. The researchers concluded that it would be beneficial to explore what it is to drink responsibly and apply in health research. Also it was recommended to apply in drinking responsibly messages of alcohol advertising. The results of the focus groups showed the discrepancy in perception. For example, participants mentioned abstaining from drinking while driving to be an example of sensible drinking, at the same time, they were concerned for the driver to miss out on having a good time. Another example, limiting consumption was individually defined rather than being set by guidelines. Getting certain feelings after a certain number of drinks would make students either continue or stop drinking.

Different to Howard et al.'s (2007) study, in which questions were presented, the study by Barry and Goodson (2011) conducted focus groups and adopted an emergent design with less structured questions and less structured focus group involvement, where the moderator was involved to the minimum. In spite of this, participants produced similar themes and definitions of responsible drinking. The aforementioned piece of research (Barry & Goodson, 2011; Howard et al., 2007) can be an appropriate foundation to explore the beliefs of members of staff about students' sensible drinking, thus allowing us to match beliefs of two populations based on the current knowledge and guidelines of alcohol use.

Attitudes and beliefs of members of staff, their knowledge about the behaviour, policies implemented in the setting, interventions or any information shared would enable researchers to study factors influencing alcohol use and understand the relation or any causal relation between those factors. For example, attitudes, beliefs, any misperceptions that would influence the decisions are made in the setting (Lear et al., 2014), by identifying and acknowledging misperceptions positive changes could be made for students to make healthier choices.

2.7 Mixed Methods

Mixed method research has proven benefits (Crutzen Kuntsche, & Schelleman-Offermans, 2013) as well as using a mixed qualitative approach, interviews and focus groups (Sharma, 2004). The research by Crutzen et al. (2013) found separate motives for several substance misuse behaviours which could not be determined by exclusively quantitative research methods. In addition, the qualitative data allows us to explore causality (Maxwell, 2004).

Redman (2008) conducted a mixed method research study of 68 men and women with a history of incarceration in which coping motives were explored in relation to alcohol use. The results showed that participants used substances for the following reasons: coping, social reinforcement, and enhancement. The qualitative results showed 82% of participants use substances for coping reasons like blocking out disagreeable thoughts, or changing unpleasant feelings or avoiding pain. 54% used substances to self-medicate mostly in relation to psychiatric symptoms. 28% of participants said they were using substances in response to a devastating life event such as the death or suicide of a family member. Two thirds stated that they used substances in response to a post traumatic experience of physical and sexual abuse. 40% used substances to cope with political and social inequalities. Depending on the

context, the reasons for drinking vary. Bringing together different approaches can fill the gaps and explain more in the area and context researched.

2.8 Interventions

Various interventions have been conducted to reduce alcohol use. The effectiveness of the interventions varied according to the type of intervention. Walters and Bennet (2000) and Wachtel and Staniford (2010) evaluated information/attitude/skills-based and motivational interviewing interventions in the meta-analysis.

The results showed that an informational/educational approach, which targets the individuals who are ignoring the negative consequences of alcohol use, have not shown to be more effective in reducing alcohol use than attitudinal and skills-based interventions (Walters & Bennet, 2000). Four out of nine educational programmes reduced alcohol use (Walters & Bennet, 2000). A study by Kivlahan, Marlatt, Fromme, Coppel, and William (1990) reduced alcohol use from 19.4 to 12.7 compared to the control group where the figures changed from 15.6 to 16.8, representing, in fact, an increase in drinking. In the study they applied a skills-based programme which showed to be the most effective in reducing alcohol use from 14.8 to 6.6. The same was observed in a study by Darkes and Goldman (1993). It found an attitudinal programme to be more effective (decrease from 16.2 to 13.0) than an educational one which used lectures and films (increase from 16.2 to 17.5); the control group also experienced an increase from 18.0 to 19.8.

Walters and Bennet (2000) reported that interventions which applied an informational approach in which the participants were provided with personalised feedback on their drinking habits, decreased alcohol use from 16.4 to 8.5 compared to the control group where alcohol use only decreased from 10.6 to 10.1 drinks per week (Agostinelly, Brown, & Miller, 1995). It can be concluded that a small number of information-based approaches to

interventions are effective. More effective interventions can be conducted by using information and skills-based approaches or adding motivational interviewing (Marlatt et al., 1998).

A number of interventions have been conducted based on changing unsupportive beliefs and attitudes of participants towards their alcohol use. The interventions targeting alcohol expectancies showed to be reducing alcohol use, but the reduction was not significant (Jones, Silvia, & Richman, 1995). Similarly, it was reported by Darkes and Goldman (1993) that an expectancy-based approach was not significant, despite a slight reduction in the observed alcohol use in the experimental group. In contradiction to the studies described above, a meta-analysis was conducted by Scott-Sheldon, Terry, Carey, Garey, & Carey (2012) in which interventions targeting expectancies were evaluated. The review showed that the interventions were successful in reducing positive alcohol expectancies with regard to the quantity and frequency consumed up to a month after. This study is the only meta-analysis which reported expectancy interventions to be successful. It could be due to the fact that the samples in the previous studies did not have high expectancies, which might have had an effect.

Skills-based programmes are helping people to acquire coping strategies for drinking moderately. These programmes are based on social learning theory and encourage self-control, responsible decision making and using other coping methods rather than drinking (Kivlahan et al., 1990). Walters and Bennett (2000) reported that, out of 6 skills-based programmes, 2 were successful in reducing drinking, one of them reported mixed results and none of them reported an increase in alcohol consumption. Baer et al.'s (1992) six-week class and discussion group and single hour advice and feedback session, yielded similar results (a reduction from 24.4 to 15.0 and 27.2 to 22.0 drinks per week respectively). Another piece of research by Marcello, Danish and Stolberg (1989) confirmed the effectiveness of skills-based

interventions. The research was conducted with two groups who received an education and skills-training intervention with a control condition. At the eight-week follow-up point no significant differences were found between the control and intervention groups. The programme involved two-hour sessions on the dangers of alcohol abuse and prevalence, stress management and drinking related skills, analysis strategies and assertiveness training. The programme, which targeted heavy drinkers, used a skills-based approach and consisted of the following: stress management, deep muscle relaxation, meditation, cognitive restructuring and the rehearsal of coping skills. In 2.5 month the participants in the skills-trained group drank significantly less than the ones in the control group. At 5.5 months, post-intervention drinking was at baseline level (Rohseshow, Smith, & Johnson, 1985).

A review which investigated motivational interviewing (MI) to reduce alcohol behaviour among 12-25 year-olds revealed the following results (Wachtel & Staniford, 2010). 14 studies have been included in the review. Twelve of them used motivational interviewing and seven of them reported a reduction in alcohol frequency and amount (Baer, Kivlahan, Blume, McKnight, & Marlatt, 2001; Borsari & Carey, 2000; Carey, Carey, Maisto, & Henson, 2006; Marlatt et al., 1998; Monti et al., 2007; Murphy et al., 2001; Spirito et al., 2004). Two studies found a reduction in binge drinking episodes (Borsari & Carey, 2000; Feltshtein & Forcehimes, 2007) and seven reported a decrease in harmful alcohol effects (Baer et al., 2001; Borsari & Carey 2005; Carey et al., 2006; Fedshtein & Forcehimes, 2007; Marlatt et al., 1998; Monti et al, 1999; Spirito et al., 2004). Two studies, which also used MI, did not report any changes with regard to alcohol misuse but there was a decrease in readiness to reduce alcohol intake (Bailey, Baker, Webster, & Lewin, 2004; Thush et al., 2007) (both interventions used a laptop computer scenario and an audio scenario about alcohol misuse). Two studies, which used interventions other than MI, were found to be ineffective in reducing alcohol use among adolescents (Boekeloo et al., 2004; Maio et al.,

2005). It can be concluded that MI is one of the effective tools to counter adolescent alcohol use.

Short follow-up studies all used MI and reported some positive results in harm minimisation. Binge drinking was also reduced in two studies (Borsari & Carey, 2000; Feldshtein & Forcehimes, 2007) with some reduction in frequency and alcohol consumption. Due to the short follow-up when the changes were observed, it is not clear if the behaviour would have persisted at this level if it had been checked in the longer follow-up. The studies which used long follow-up reported a reduction in alcohol intake and harmful effects. That could be due to the fact that the participants matured over time and their consumption diminshed. The authors concluded that, although the interventions included MI,they were differently designed making it impossible to recommend any of the interventions used. MI was successful even when it was used as a single session. The conclusion drawn from this is that one-to-one sessions would be more effective than any audio or computer-based intervention. Two earlier systematic reviews reported difficulties in determining the most effective interventions. Foxcroft, Ireland, Lowe, & Breen (2002) reported that there was not enough reliable evidence to recommend a particular intervention. A recent review of the same researchers' culturally based intervention as well as the straightening families programme by Spoth, Redmond, and Shin (2001) cited in Foxcroft et al. (2002) found that the approach had potential value. If the intervention is implemented based on the study, then an international register needs to be established on drug and alcohol, and alcohol prevention interventions (Foxcroft et al., 2002).

The following conclusions can be drawn: students would appear to benefit from skills-based intervention. In addition, identifying the attitudes and beliefs, and targeting these, would seem to be a way forward. While conducting educational intervention, other types of intervention should be incorporated into the programme as the educational interview on its

own did not lead to a reduction in alcohol use (Walters & Bennet, 2000). Finally, 58% of interventions using motivational interviewing showed to be effective with a predicted positive change in health risk behaviour (Wachtel & Staniford, 2010).

2.9 Designing Effective Interventions

In order to address risky health behaviours a number of studies have been carried out in order to explore the effectiveness of interventions and how to design effective interventions. Michie et al. (2014) introduced a behaviour change wheel after exploring existing behaviour change interventions and collecting taxonomies for various health behaviours. The authors offer a practical guide to designing interventions according to the behaviour targeted. The core of the behaviour change wheel is a COM-B model which includes capability, opportunity and motivation in engaging in, or promoting, positive health behaviour. For example, if a particular behaviour is to be targeted within the organisation, COM-B needs to be addressed at all levels from frontline workers to senior management. The behaviour change wheel consists of several levels important to changing behaviour: sources of behaviour, intervention functions, policy categories (Michie et al., 2014).

One of the steps of effective intervention design is Theoretical Domain Framework (TDF). TDF highlights the use of theories in the intervention (Michie et al., 2014), but the evidence that theory-based interventions can be effective is not fully supported (Prestwich et al., 2014). Prestwich et al. (2014) found the interventions used in relation to health behaviours, both theory-based and the ones which did not report any theory, were equally effective. It was also found that the interventions are not reporting the theories and the methodology of the research being conducted. As a result, the intervention cannot be replicated. The conclusion was drawn that using theory as a base for the intervention does not necessarily increase the effectiveness of interventions. The same was observed when two

theories were applied within one intervention. The recommendation drawn by Webb, Sniehota, & Michie. (2010) is in support of Prestwich et al. (2014). The review presented on interventions to target addictive behaviour calls for the science of intervention development and gives recommendations about the components of the theories applied to be reported in interventions (Webb et al., 2010).

2.10 Recent Studies

Two hierarchical linear regression analyses were performed by Norman and Conner (2006). The first regression aimed to check for intention to binge drinking over 4 weeks. Predictor variables were entered in four blocks following a previous study (Norman & Conner, 2006). The four blocks entered were:

- age and gender
- attitude subjective norm and perceived behavioural control and self-efficacy
- Time 1 past binge drinking-
- the interaction of attitude and past behaviour.

These blocks assisted in examining TPB components entering them after controlling for age and gender. Time 1 binge drinking behaviour was tested as a predictor of intention. Effect of Time 1 binging behaviour was checked as a moderator of the relationship between attitude and intention (Woolfson & Maguire, 2010).

In the final regression model, 80% of the variance in intention was predicted. Attitude ($p<0.001$); self-efficacy ($p=0.016$) and past drinking behaviour ($p=0.001$) were still significant predictors. The interaction term attitude and past behaviour were significant negative predictors ($p=0.001$), with the other elements (subjective norm and perceived behavioural control) being non-significant. This result can be interpreted in a way that past

behaviour was a moderator of the influence of attitude and intention, and this influence increased when attitude weakened past behaviour (Woolfson & Maguire, 2010).

Following Aitken and West (1991), Woolfson and Maguire (2010) conducted a simple slope analysis to test interaction, in which attitude was shown to be a significant predictor of intention at a moderate or low level of past behaviour. At a high level of past behaviour, attitude was not a predictor of intention. The authors concluded that the more binging occasions the students had experienced in the past, the less their attitude could be predicted with regard to their binging in the future (Woolfson & Maguire, 2010).

Time 2 data was analysed using binary logistic regression. Attitude was one of the main predictors of intentions to binge drink. The study confirmed the findings by Norman and Conner (2006). In Norman and Conner's (2006) study, past behaviour was a significant predictor of intention. The study by Woolfson and Maguire (2010) confirmed the same and that the relationship between attitude and intention was moderated by past behaviour over a 4-week period. Frequent past binge drinking weakened the relationship between attitudes and intention (Woolfson & Maguire, 2010).

A study by Duncan, Forbes-McKay & Henderson (2012) was conducted with pregnant women who consumed alcohol prior to becoming pregnant to see if there will be any changes in behaviour during pregnancy. The statistical analysis used was Mann-Whitney U tests to investigate differences between drinkers and abstainers on TPB subscales. Later Binary logistic regression was conducted to examine the effectiveness of the TPB in explaining drinking behaviour and the intention to drink during pregnancy.

Changes to alcohol consumption were made by the participants at 5.18 weeks. Over a third of participants (36.2%) were drinking 4 times per week and another third (35.3%) 3 times per week, which, during pregnancy, dropped to 16.4% and 2.6% respectively. During pregnancy, 64.7% abstained from alcohol completely and 34.5% did so to some extent. More

than half of the participants (55.5%) drank more than what is recommended for a non-pregnant woman (Duncan et al., 2012).

Three constructs of the TPB were found to be non-normally distributed. Therefore, Mann-Whitney U tests were performed to investigate differences between drinkers and abstainers. Statistically significant differences were found. Abstainers had higher scores on the intention scale than drinkers ($p < .05$). Abstainers also had higher scores on the subjective norm scale than the drinkers ($p < .05$). Higher scores on the intention scale suggest greater intention to quit drinking during pregnancy, while higher scores on the subjective norm scale indicate greater perceived pressure from significant others to quit drinking (Duncan et al, 2012).

A statistically significant difference was also found on the attitude scale ($p < .05$), with abstainers (Mdn = 1.00) scoring lower than drinkers (Mdn = 3.00). Lower scores on the attitude scale indicate a less positive attitude toward drinking during pregnancy. The PBC scale did not show any significant differences between drinkers and abstainers ($p > .05$). The PBC scale measures strength of participants' perceived self-efficacy for stopping drinking, with higher scores indicating a greater sense of control over drinking (Duncan et al., 2012).

Correlation analyses to examine the relationship between TPB variables and intention (to drink alcohol during pregnancy) were also conducted. Attitude and subjective norm variables were strongly correlated with intention, and a small positive correlation existed between PBC and intention (Duncan et al., 2012).

In order to examine the utility of TPB components, Binary logistic regression was used in order to examine and predict the intention to drink during pregnancy. The theory as a whole explained 59% of the variance in intention to drink during pregnancy, attitude and subjective norm variables were significant contributors of the model. Binary logistic regression was performed to assess the predictability of TPB to explain alcohol use

(behaviour). The model was significant, indicating that the TPB can distinguish between drinkers and abstainers. The TPB as a whole explained between 57.1% (Cox & Snell's *R*2) and 77.1% (Nagelkerke's *R*2) of the variance in drinking status, and correctly classified 91.8% of cases. Only the intention and attitude subscales made a unique statistically significant contribution to the regression model. The strongest predictor of drinking during pregnancy was intention to abstain, with an inverted-odds ratio of 13.51. This indicates that for each 1-point drop in the intention to abstain score, the odds of drinking during pregnancy increases by a factor of 13.51. The model had a positive predictive value of 93.6% (Duncan et al., 2012).

French and Cooke (2012) conducted a study in which they aimed to investigate how much salient beliefs in relation to binge drinking can predict students' alcohol use. The study applied TPB components. The study was longitudinal and over one evening. 192 students were recruited when they came to the campus bar. At the beginning of the sessions students completed a questionnaire with open-ended questions about the salient belief in relation to binge drinking and rated TPB components. As they were leaving they were asked to report the number of alcoholic drinks they consumed (French & Cooke, 2012).

Coding frames were developed with the use of 30 randomly selected questionnaires. Cohen's Kappa for dislike/hate (k=0.95), like/enjoy (k=0.85), disadvantages (k=0.83) and difficulty (k=0.87) were used. Independent sample t-tests were carried out to compare the differences in mean scores of attitude for presence or absence of each behavioural belief. The same was done in relation to subjective norm to assess the level of normative belief and PBC assessing the level of control beliefs. In addition, an independent sample t-test was performed to compare the differences in mean scores of intention and behaviour for absence or presence of each belief (French & Cooke, 2012).

The results of several linear regression analyses with intention and 2 more analyses with intention and behavior being a dependent variable showed that the participant who held the belief that binge drinking is fun and being sociable, scored significantly higher in attitude than the ones who did not. The participants who had seen losing control as a disadvantage scored significantly lower in attitudes than the participants who did not. The participants who thought there is no advantage to binge drinking scored significantly higher than the ones who reported one advantage. The participants who did not report any disadvantage scored higher in attitude than the ones who reported only one disadvantage. In relation to intention the participants who had a belief of binge drinking as being fun and a way to be sociable, but who at the same time did not report spending money as a disadvantage, scored significantly higher in intention. More alcohol was consumed by the participants who reported getting drunk earlier or the ones who did not see relaxation as a like/advantage (French & Cooke, 2012).

In relation to subjective norm, the participant who thought that their family and friends would disapprove of binge drinking, scored significantly higher in subjective norm. Those who reported that friends and health care professionals would disapprove scored significantly lower in subjective norm. If the participants thought the family would disapprove, they scored significantly higher in subjective norm. Higher significant intention was observed in the participants who thought the family would disapprove but friends would approve of their binging. Higher intention was also reported in relation to sports teams approving of the behaviour and role model disapproving (French & Cooke, 2012).

Perceived behavioural control was higher among participants who thought being with friends would make it easy to binge drink; lack of money would make it difficult to binge drink was shown to be a predictor of lower PBC. Being on medication would make binging difficult for participants who had significantly lower intention scores. Also significantly more

alcohol was consumed by the participants who thought binge drinking would be easy if they are in good environment, celebrating and playing drinking games. Those who though being ill or on medication would make it difficult to binge drink had significantly higher scores on alcohol use (French & Cooke, 2012).

Attitude and subjective norm were significant predictors of intention to binge drink. PBC was not. Intention was a significant predictor of drinking behaviour over the evening. PBC was not. Two beliefs out of seven came out to be significant predictors of intention to drink. The first was believing that friends will approve binge drinking, and the second believing that a lack of money would make it difficult to binge drink. When the beliefs were checked in relation to drinking behaviour, 5 beliefs came out significant, namely believing that getting drunk is an advantage of binge drinking, believing that the sports team would approve of the binging, believing that celebrating, drinking patterns and the environment would make it easy to binge drink. These were significant predictors of behaviour (French & Cooke, 2012).

Kraft, Rise, Sutton, & Røysamb (2005) examined the dimensional structure of perceived behavioural control (PBC), the conceptual bases of perceived difficulty items and how PBC components and instrumental and affective attitudes relate to intention and behaviour. The research was conducted in two waves with Norwegian graduate students. Confirmatory factor analysis and multiple regression were used with structural equation modelling. The results showed that PBC consists of several but related factors: perceived control, perceived confidence and perceived difficulty, or as two interrelated factors representing self-efficacy (measured by perceived difficulty and perceived confidence or just by perceived confidence) and perceived control.

The results showed that perceived difficulty items overlapped affective attitude. Perceived confidence was a strong predictor of exercise intention but not recycling intention.

Affective attitude but not instrumental attitude was identified as substantial predictor of intention, the findings suggest that under some circumstances it is not appropriate to measure PBC with perceived difficulty items. PBC as a predictor of intention is overestimated and effective attitude is underestimated (Kraft et al., 2005).

Elliott and Ainsworth (2012) conducted a study in which the TPB was analysed as one component and two component theory. Two-component TPB predicted 90% of the variance in which intention was only a predictor of behaviour and instrumental attitude, affective attitude and self-efficacy had an indirect relation through intention to behaviour. One-component TPB was shown to be a worse fit, thought predicted considerable variance of 82% in behavior. Intention was only a predictor of behaviour, instrumental attitude and general perceived behavioural control and had an indirect effect on behaviour (through intention) and injunctive norms did not have any effect (Elliott & Ainsworth, 2012).

Lettow, Vermunt, Vries, Burdorf, and Empelen (2015) conducted a longitudinal study with one month follow-up with 410 young adults (age range 18-25) in which they explored how the prototypes predict health-related behaviours and intention as TPB was used for this study. The stability of a perception was tested in relation to prototype-intention and prototype-behaviour relationship. Five types of prototypes were examined: abstainer, moderate drinker, heavy drinker, tipsy and drunk. Perception of prototype favourability and prototype similarity was assessed in time 1 and time 2 for its stability. The results showed participants with high perceived control had high intention to drink sensibly. Most participants reported to be similar to a moderate drinker. The drunk prototype was considered to be least favourable and participants reported to be least similar to it (Lettow et al., 2015).

The first regression analysis was performed to show the intention to drink sensibly. Baseline drinking behaviour, attitude, descriptive norms, PBC, favourability of or similarity to the abstainer and drunk prototypes and similarity to the tipsy prototype showed a

significant relation to the intention to drink. The variance explained was 36% for the prototype favourability model and 41% for the similarity model (Lettow et al., 2015).

The results showed that prototype perception-intention relation was moderated by stability. Thus prototype stability enhanced prediction of intention. There was no stability effect for the prototype-behaviour relationship. Stability can improve the prediction of intention (Cooke & Sheeran, 2004). In addition, Lettow et al. (2015) found that prototype stability moderated the relation between intention but not behaviour which was in contrast to Cooke and Sheeran (2004), it was suggested that moderating effect of stability on cognition-behaviour relation. The results of Lettow et al. (2015) also showed that only stable abstainer and drunk prototypes were predicting intention. The results indicate that abstainers and drunk prototypes have a stable cognition in relation to alcohol use (Lettow et al., 2013). In the study, prototype similarity but not favourability were moderated by stability. Similar results were found about the predictability of prototype similarity. In previous research it was a stronger predictor of drinking (Norman, Armitage, & Quigley, 2007).

Rivis et al. (2011) examined TPB and PWM to predict older drivers' willingness to drive whilst intoxicated. The sample size was N=200. Two groups of drivers with an age range of 17- 29 and 30-60 were formed. Findings suggested that prototype similarity and favourability was significant in older drivers ($p<.01$) but not significant among younger drivers (ns) when a regression analysis was performed, in which variables were entered relating to age group on the same step (Rivis et al., 2011).

Multiple regression, which assessed younger drivers' willingness to drink, predicted 62% of the variance in drinking and driving. The variables which significantly contributed to the variance were subjective norm, attitude, PBC 1, and prototype similarity. The authors deduce from this that young drivers are more willing to drink and drive when they perceive little pressure from significant others not to drink and drive, younger drivers have a

favourable image of the people who drink and drive, and they think they are likely to drink and drive. It is difficult for them not to drink and drive when they have consumed more than the recommended amount of alcohol. Although the results were in support of using constructs selected for the study, prototype perception was not a significant predictor in younger drivers (Rivis et al., 2011).

The results of hierarchical regression for the second group (aged 30-60) of the same study, showed 40% of variance in the willingness to drink and drive at the first step when PWM and TPB were entered, with significant contribution of subjective norm, PBC 1, and prototype evaluation and prototype similarity. The interpretation of the results was that older drivers are more willing to drink when they think there is less pressure of significant others to not drink and drive, and they find it difficult to never drive when intoxicated. Older drivers have a positive perception of a person who drives after consuming four units of alcohol, and they see themselves as similar to them. The second step included interaction term of prototype similarity and prototype favourability and the results were significant, which is the opposite to the results of regression with younger drivers. Variance added by entering interaction was 7%. Final regression predicted 47% of the variance in willingness to drink and drive among older drivers, a significant contribution was due to subjective norm ($p=.061$), PBC 1, prototype evaluation and interaction between prototype similarity and prototype evaluation. The authors used simple slope analysis (Aiken & West, 1991) to examine prototype favourability at three levels of prototype similarity and the results showed the more favourable perception of a drink-driver is associated with greater willingness to drink and drive, but not when prototype similarity is low or moderate. When drivers have high prototype similarity, willingness to drink is reduced and it is significant, at the same time evaluation of drink driver prototype is unfavorable (Rivis et al., 2011).

Hagger et al. (2012) conducted a study in which company employees from four countries took part. A three-wave study with prospective design used measures of TPB and SDT to explore alcohol use. The participants (N=712) who took part in the research had a median age of 30.41, and SD= 8.31. The self-reported measures were completed in time 1 and in time 2, which took place in a month's time, and time 3 in a 2-month interval after time 2.

Univariate ANOVA, FAST scores were used as dependent variable and national groups as independent showed significant difference in FAST scores between the Finnish sample in comparison with the UK sample. Also there were some differences in units consumed, the UK sample consumption was higher than that of employees in other countries, and the Finnish sample consumed significantly less than employees of other countries (Hagger et al., 2012).

Correlations reported showed a positive relation between behavioural measures of TPB. PLOC, self-determination theory, and components represented a continuum-like correlation, from high to low levels of autonomous motivation. The TPB component, intention, attitudes, subjective norm and PBC were shown to be correlated with more autonomous forms of motivation, intrinsic motivation and identified regulation. The strongest relation belonged to identified regulation. Autonomous forms of motivation were significantly negatively related to TPB components, as motivation components were about keeping alcohol use within safe limits (Hagger et al., 2012).

Path analysis was performed using the study variables T1-T2, and the variance predicted for units consumed was 41.32% and 31.44% binge drinking occasions, from T2-T3 66.94% and 29.27% of variance in units consumed and binging occasions respectively. It was also reported that the TPB component added variance to intention and SDT components to TPB components, attitude, subjective norm and PBC in both models (Hagger et al., 2012).

In relation to the study hypotheses, identified regulation had a significant effect on attitude and PBC in both models. Intrinsic, another autonomous form of motivation, had a small effect on attitude T2-T3, identified regulation was a significant contributor to subjective norm in both models. External regulation predicted subjective norm significantly in both models, external regulation also had a small effect on attitude in the T1-T2 model and on PBC in the T2-T3 model. TPB components, attitude, subjective norm and PBC significantly predicted intention in both models, though subjective norm had a small effect. Intention had a direct effect on the number of units consumed in both models but it could not predict binge drinking. PBC had a significant effect on the units consumed in the T2-T2 model (Hagger et al., 2012).

In relation to indirect effects, the authors tested the indirect effects of SDT components on TPB. The authors hypothesized that autonomous forms of motivation will predict intention via mediators, attitude, subjective norm and PBC. The results of analysis showed an indirect effect of identified regulation on intention in both models. Also intrinsic motivation had a significant effect on intention in the T2-T3 model. The results were in favour of the hypothesis. In relation to the mediating effect of intention between TBP components and behavioural variables, attitude had a negative indirect effect on a number of units consumed in both models. PBC also had a negative indirect effect on the number of units consumed in T1-T2, the T2-T3 PBC's effect on intention was direct. The final hypothesis was that an autonomous form of motivation will have an indirect effect on behavioural variables. The significant indirect autonomous form of motivation and identified regulation had a significant indirect effect on the number of units consumed and binge drinking occasions in both models (Hagger et al., 2012).

the questionnaire for TPB is usually constructed for the purpose of every individual study and considering the population it is being constructed for (Ajzen, 2002). French,

Cooke, Mclean, Williams, and Sutton (2007) argue that not having a standardized TPB questionnaire will not allow to conduct robust systematic reviews of the studies. If there is an issue in understanding the questionnaire then it will be affecting all the studies which use a TPB questionnaire, as all the studies are based on more or less similar wordings (French et al., 2007). The results and conclusion French et al. (2007) drew was to make slight changes as participants had difficulty in answering questions with should/should not in questions about subjective norm. Another difficulty was caused by the questions which had a hypothetical basis. Two studies conducted by French et al. (2007) used two different populations, namely students and recruits from the general population. The students had less difficulty in completing the questionnaire and the authors concluded that better educated participants might have fewer problems. Following the study, it was aimed to construct a user-friendlier questionnaire for the participants, not having too many negatively worded questions, simple hypothetical questions, and using the 1-7 Likert scale. The fact that the sample selected for the current study are students might yield more robust answers and cause less difficulty in answering the questions (Armitage & Conner, 1999; French et al., 2007).

The Study by Rivis et al. (2011) was a cross-sectional study in which TPB and PWM were explored in relation to drinking and driving. Elliot and Ainsworth (2012) chose a longitudinal design with a 2-week follow-up study. Hagger et al.'s (2012) research was a three wave prospective design with a sample consisting of company employees. The current study has adopted a longitudinal design as there are not many studies which use such a design. In addition, the design selected will allow it to be checked for changes in drinking over time (Bennet, 2013) and the cause and effect relationship (Webb & Sheeran, 2006). There has not been a study in which the variables selected have been researched with university students in a longitudinal design. The sample size required for the current longitudinal survey is N-294. This allows a power of .9 in which an effect size of around .10

would be found significant at the p=.05 level within a multiple regression model with up to 23 predictors (Blood, Cabral, Heeran, & Cheng, 2010).

To determine the strength and the direction of the linear relationship between the variables in the study, Pearson correlation has been performed (Pallant, 2007). It is common to report correlation in relation to the explored variables of the study as it allows examining the relationship between variables (Duncan et al., 2012; Hagger et al., 2012; Woolfson & Maguire, 2010).

The study by French and Cooke (2012) used independent-samples t-test as the difference in mean scores of PBC according to the level of control belief participants have. The same analysis was applied to attitudes, subjective norm, intention and behaviour. In order to check for significant changes in the variables over 3-month time, current research will be applying paired-sample t-tests (Pallant, 2007).

A number of studies have used a linear regression with different variables as dependent variables (French & Cooke, 2012) and hierarchical regression (Lettow et al., 2014) as the aim was to check predictability of specific independent variables in relation to dependent variables. Elliot and Ainsworth (2012) and Hagger et al. (2012) employed path analysis as it allows endogenous variables to be used as dependent and independent variables at the same time, and allows to observe for the direct and indirect effects within the same path model (Elliot & Ainsworth, 2012). Therefore, for the purpose of the current study, path analysis has been selected for analysis.

2.11 Summary and Rationale for the Study

The social cognitive framework of TPB, PWM, SDT, coping styles, alcohol expectancies, psychological wellbeing and personality factors will be studied together because a single theory use has not provided enough explanation in previous research (French

& Cooke, 2012) when it was combined with several other theories (Zimmermann & Sieverding, 2010). STD will provide information on origins of the social cognitive constructs that influence the behaviour (Hagger et al., 2012). In addition, these three theories have been successfully predicting behaviour in the chosen area of research (Cooper & Russell, 1988; Hagger et al., 2012; Todd & Mullan, 2011; Rivis et al., 2006; 2011). The study will determine any links between the components or any causality which predicts alcohol misuse among university students. It will be based on the current knowledge within the area and it is intended to be an extension of Hagger et al.'s (2012) study. Thus the measures included in Hagger et al. (2012) will be complemented by measures reflecting the elements from PWM and SLT as described above and the models will be compared in relation to predicting changes in drinking behaviour over time. Although the general field is well-researched, only three studies have examined drinking behaviour using TPB and PWM. None of them has been longitudinal. There are no published studies comparing three theories with cross-lagged data.

The previous studies were used to inform the qualitative part of the current mixed methods research. The qualitative part will adopt a framework analysis, the method provides a flexible approach in its usage and allows to analyse data in a deductive way. In addition, framework analysis is widely used in health research (Richie & Spencer, 2002).

2.12 Chapter Summary

This chapter has addressed the theories underpinning the current study. It gives an overview of the theories and has discussed the previous research conducted in the area, thus providing the rationale for the present study.

Chapter Three: Overview of the Research Design

3.1 Introduction

The proceeding chapter has identified gaps in the literature in understanding alcohol use based on the theories applied in this study. The theory of planned behaviour, the prototype willingness model, self-determination theory and social learning theory have been researched but no previous study has explored alcohol use by combining them together. Chapter 2 identified the need for further exploration of theories and the ways to explore student alcohol use and identify personal, micro and macro factors of behaviour. Considering the gaps and the recommendations drawn in the previous chapters the present study was planned. The aim of Chapter 3 is to provide the information on the design selected in a mixed method study. This section outlines the aims and objectives of the overall study, research hypotheses, research questions for each phase of the research and rationale for the choice of the current mixed methods study. The chapter also includes the visual illustration for the overall study.

3.2 Current Research

3.2.1 Aims, objectives and research questions.

3.2.1.1 Aims. The general aim of the research is to explore students' alcohol use and misuse taking into account personal, micro, macro level factors influencing their choice in the behaviour performance.

In order to achieve this aim, 324 university students were recruited for the longitudinal study to perform quantitative analysis of predictors of behaviour from a personal perspective. In addition, interviews were organised with N-23 students and 2 sets of focus

groups with staff of university support services (N-7) were conducted to give more depth about personal as well as micro and macro level factors involved in behaviour formation.

3.2.1.2 Objectives of the research.

To identify factors which contribute towards alcohol misuse in students based on analysis of quantitative data obtained from longitudinal surveys and interpreting narrative data, obtained during interviews.

To conduct focus groups with members of student support services to gain further insight into understanding the behaviour and explore current practices to discuss and recommend variables to be targeted during interventions for students.

3.2.1.3 Research questions.

1) What social cognitive factors influence students' alcohol use and their interaction over time?

2) What are the predictors of change?

3) What micro and macro level factors are there to influence students' behaviour?

The specific research aims and objectives for each phase of the research were as follows:

3.2.2 Pilot study. The pilot study aimed to select questionnaires for the current study to investigate significant variables of TPB (Ajzen, 1991), PWM (Gibborn & Gerrard, 1995; 1997), SDT (Ryan & Deci, 2000), SLT (Bandura, 1971) and personality variables to improve the predictive properties of TPB theory (Ajzen, 2011). Initial quantitative analysis identified three outcome variables, namely predictors of drinking to cope, alcohol consumption and

alcohol related problems, following Cooper and Russell (1998). Hypotheses for the pilot study were posed based on Hagger et al.'s (2012) study which combined TPB and SDT.

3.2.2.1 Aim of the pilot study.

Prepare effective measures and conduct initial quantitative analysis to identify significant contributors of alcohol use based on previous research

3.2.2.2 Objectives of the pilot study.

To select the most effective questionnaires based on the literature review which have been used to measure the predictors within alcohol context

To collect data and analyse measures for reliability

To define inter- correlations

To run multiple regression analysis to check for the hypotheses of the study and find contributors of drinking to cope, alcohol consumption and alcohol related problems

Hypotheses to be tested in the pilot study

H1 Social cognitive constructs of TPB will be predicted by motivational orientation.

H2 Changes in TPB and PWM component will contribute towards changes in intention and behaviour.

3.2.3 Quantitative study (Phase I). Phase I of the study aimed to test for predictive properties of augmented models of TPB, PWM, SDT, SLT and personality constructs. The models were hypothesised based on Hagger et al. (2012), Todd et al. (2014; 2016) and Simons, Gaher, Correia, Hansen, and Christopher (2005). Three hundred and twenty-four students of several cohorts took part in Phase I in November 2014. Time 1 questionnaires were distributed and the data was collected by the self-completion method.

3.2.3.1 Aim of phase I.

Explore the predictive properties of augmented models of SDT, TPB, PWM, social learning theory and personality factors, identify any significant moderators

3.2.3.2 Objectives of phase I.

To select effective measures or replace existing ones and shorten the questionnaire, if needed, based on the results of the pilot study

To collect data from 300 participants in time 1 with the use of the questionnaire developed

To use SDT, TPB, PWM and social learning theory measures to investigate correlation between the variables.

To hypothesise models based on previous research and define predictive properties of augmented models.

To identify significant variables within the models

3.2.3.2.1 Research hypotheses:

H1 Social cognitive constructs of TPB will be predicted by motivational orientation.

H2 Changes in TPB and PWM component will contribute towards changes in intention and behaviour.

H3 Relationship between controlled motivation (external regulation and introjected regulation) and alcohol consumption will be mediated by subjective norm.

H4 Past behaviour will be a predictor and prototypes will be moderators within the framework suggested by Hagger et al. (2012)

H5 Alcohol consumption will be a moderator between drinking to cope and alcohol related problems.

H6 Personality factors, extraversion, neuroticism and impulsivity will be positively related to alcohol use.

3.2.4 Quantitative study (Phase II). Phase II was about exploring hypothesised models based on previous research (Hagger et al., 2012; Todd et al., 2016, Simons et al., 2005), comparing change in variables in two phases and identifying mediators and predictors of change. In Phase II, time 2 questionnaires were distributed to the same cohort of students as in time 1 three months later and the same measures were used. The analysis of time 2 data was performed.

3.2.4.1 Aim of phase II.

Explore the predictive properties of augmented models of SDT, TPB, PWM, social learning theory and personality factors and any causal interaction which occurs over time; also define any significant moderators in hypothesised models and predictors of change.

3.2.4.2 Objectives of phase II.

To collect data 3 months (Feb 2015) after time 1

To check for the changes within variables over time and explore causal effects

To explore predictive properties of variables over time with the use of hypothesised (SEM) models

To identify predictors of change

3.2.4.3 Research hypotheses of phase II.

H1 Social cognitive constructs of TPB will be predicted by motivational orientation.

H2 Changes in TPB and PWM component will contribute towards changes in intention and behaviour.

H3 Relationship between controlled motivation (external regulation and introjected regulation) and alcohol consumption will be mediated by subjective norm.

H4 Past behaviour will be a predictor and prototypes will be moderators within the framework suggested by Hagger et al. (2012)

H5 Alcohol consumption will be a moderator between drinking to cope and alcohol related problems.

H 6 Direct contributor of change will be PBC in predicting change

H 7 Intention will not be a direct predictor of alcohol use in predicting change

3.2.5 Qualitative study (Phase-III interviews). In phase III the interviews were conducted with 23 participants (Maycut & Morehouse, 1994) as interviews are an appropriate tool to explore sensitive issues (McCosker, Barnard, & Gerber, 2001). Semi-structured questions were used to guide the participants and the questions were informed by Howard et al. (2007), Van Wersch and Walker (2009), Alselaimi (2010) and Qu and Dumay (2011). Framework analysis has been applied for data analysis. Students who took part in time 1 and 2 were invited for interviews in January 2014. Students were interviewed individually. The interviews were recorded and transcribed. Consequently, the results were used to perform triangulation of quantitative and qualitative data.

Semi-structured interviews started by asking students general questions about drinking to identify any additional determinants in drinking (Qu & Dumay, 2011). That was followed by structured interview questions. The framework analysis was used in the analysis to triangulate the data obtained from the quantitative part of the study (Maxwell, 2004; Richie & Spencer, 2002).

3.2.5.1 Aim of phase III.

Explore students' beliefs, attitudes and experiences about alcohol use to determine the factors influencing their choices on a personal and micro level

3.2.5.2 Objectives of phase III.

To conduct semi-structured interviews to gain further understanding of students' drinking behaviour from their perspective.

To investigate beliefs, attitudes, drinking habits, motivation and perceptions of students and outside factors influencing their alcohol use and misuse

To use the data to enable triangulation of the results obtained during quantitative research

To use the findings to suggest interventions and recommendations for university support services

3.2.5.3 Research questions of phase III.

RQ 1 What are the contextual factors which contribute to students' alcohol use?

RQ 2 Where do the components of social cognitive theories fit into the matrix of alcohol use?

3.2.6 Qualitative study (Phase-IV focus groups). In phase IV, focus groups with members of students support services of the university were conducted in June 2015 with the use of purposive sampling (Teddlie & Yu, 2007). It started with asking participants non-structured questions (see question route in Appendix E3), and the question route was developed for the purpose of the current research informed by Van Hout and Connor's (2008) and Van Wersch and Walker's (2009) research and the recommendations of Qu and Dumay (2011) on qualitative research structure, conduct and typology of questions used were taken into account. The data for focus groups was analysed with the use of framework analysis (Richie & Spencer, 2002) and manually using EXCEL software to arrange the matrix (see Appendix C.3). The findings will be used to draw recommendations for interventions for university students, and they will be disseminated among university key personnel.

3.2.6.1 Aim of phase IV.

Explore experiences of members of staff of student support services to gain an insight to students' experiences of alcohol use and identify micro and macro level factors influencing the behaviour.

3.2.6.2 Objectives of phase IV.

To conduct focus groups with key University personnel to gain further insight into drinking behaviour at the University

To explore further personal, micro and macro level factors influencing students' alcohol use

To draw conclusions on appropriate interventions for the University students, based on the literature review, interviews and focus groups

To organise data and identify themes which would address specific research questions of focus groups

3.2.6.3 Research questions of phase IV.

RQ 1 What are the contextual factors which contribute to students' alcohol use?

RQ 2 Where do the components of social cognitive theories fit into the matrix of alcohol use?

3.2.6.4 Specific research questions for focus groups (phase IV).

In addition to identifying factors to affect student alcohol use, with the help of focus groups specific research questions were selected. The questions were informed by Van Hout and Connor (2008). The purpose was assessment of environmental factors and identifying current practice within the University (Michie et al., 2014).

What are the policies and procedures within the university as regards alcohol?

What is the current practice and what are the interventions?

What are the challenges in enforcing alcohol policies?

How does the university promote sensible drinking?

What are the beliefs and knowledge about students' substance use?

What are the student safety concerns?

What communication improvements could be made between departments and the University to support both staff and students?

What are the action and policies suggested?

3.3 Mixed Methods Rationale

In order to address the research aims and objectives it was decided to adopt a mixed methods approach (Creswell & Plano Clark, 2007). Mixed methods have existed for 20 years. The studies were known to include both qualitative and quantitative traditions within them (Cresswell, 2009; Maxwell & Loomis, 2003; Tashakkori & Teddlie, 2003). Mixed methods have been designed to combine qualitative and quantitative based on the appropriate philosophical assumptions. It has advantages over only qualitative or quantitative approach (Creswell & Plano Clark, 2007). Clear definitions of philosophical ideas behind the research assist the researcher to identify and justify why particular types of investigation have been

chosen to be used to answer the research questions. Those need to be addressed prior to conducting the research.

Creswell (2009) used the term "worldview" to signify the base for the research. He argues that every researcher conducts research based on their "their general orientation about the world" and the types of belief they hold by taking researcher's decisions of research to a personal level (p. 6). Until recently, only worldview for quantitative post positivism and qualitative constructivism had been applied. There are five different worldviews: post positivism, constructivism, transformative (Teddlie & Tashakkori, 2009) / or advocacy (Cresswell, 2009) and pragmatism. According to the worldview positivists and constructivists have, they separate positions by using research of quantitative nature and qualitative respectively.

In addition, mixed methods study can be nested in the transformative paradigm. This philosophical view is related to solving the issues of social inequalities and it puts the importance on the lives and experiences of groups: women, people with disabilities and links social enquiry to action (Teddlie & Tashakkori, 2009).

Different to the previously mentioned philosophical worldviews, pragmatism is defined as the stance used for mixed method research, which has two characteristics. Firstly, it is a rejection of the dogmatic views of postpositivism and constructivism. Secondly, it is a search for practical answers, which interests the researcher (Teddlie & Tashakkori, 2009). There are still debates between the communities of philosophical stance, whether mixed method components QUAN and QUAl need to be treated as separate, or either pragmatic or transformative should be applied and define the route mixed method should take (Teddlie & Tashakkori, 2009).

The advantage of using a mixed methods approach is that it creates more flexibility in which confirmatory and exploratory questions can be investigated and provides better

inferences and diverse views that than can be provided within one study (Teddlie & Tashakkori, 2009). A mixed methods approach is from two different traditions and has incompatible epistemologies. A mixture of qualitative and quantitative means addressing different research questions, so incompatibility of method, known as "incompatibility theses", is being rejected by some theorists (Teddlie & Tashakkori, 2009, p. 15). Although there has been some unsuccessful mixed method research conducted (Lunde Heggen, & Strand, 2013), it is still promoted as the combination of two methods that provides a better understanding of the phenomena explored. Howe (2012) mentions that triangulation is possible, which serves to be the tool for better advanced research.

A study by Lee and Rowland (2015) researched women's mental health in relation to miscarriage. The quantitative part of the study was a longitudinal study and defined that, in women who had had a miscarriage, their mental health deteriorated over the time, whereas qualitative data showed that over a longer period of time, women experienced emotional responses and a long and difficult process in coming to terms with their loss. The results of quantitative and qualitative were somehow different but when both were integrated, authors argue it gave more insight to the problem which could not be achieved by having a qualitative or quantitative study. Lee and Rowland (2015) concluded when mixed method produced mixed results it integrated disparate findings about miscarriage and women's wellbeing.

Using a combination of quantitative methods or combination of qualitative methods is not seen as causing any disagreements. Mixing qualitative and quantitative is about applying different epistemological origins which have fundamental differences and putting forward a question how mixing methods can inform valid knowledge. Quantitative, which is based on realist perspective in which precise objective measurements are used to predict the world, is seen to be independent, whereas qualitative is about interpretative perception, in which rich

data is generated as a result of activities in a social and cultural context (Lear, Weinstein, Smallwood, Satterfield, & Propsom, 2014). Pragmatism makes it possible and has now became a foundation for the mixed method studies (Cornish & Gillespie, 2009; Yardley & Bishop, 2007). The authors assume that, on a practical level, pragmatism can be an appropriate method for a research aim, using measures and experimental design for causal hypotheses testing for the quantitative part and in depth interviews for the qualitative part to generate a contextualised understanding of a new topic. However, at the philosophical level, qualitative and quantitative can be viewed as separate and both produce knowledge.

Sandelowski (2000) recommended combining qualitative and quantitative methods during sampling, data collection and data analysis. Morse and Niehaus (2009) use the term *point of interface* to refer to the point when qualitative and quantitative are related to each other in mixed method research. In an analytical point of interface qualitative and quantitative data are analysed together, while in a result point of interface qualitative and quantitative data are analysed separately and the results are then integrated. Integration occurs in at the interpretation phase, for example appearing in the discussion section of the article (Creswell, Klassen, & Plano Clark, 2011; O'Cathain, Murphy & Nicholl, 2010). There are at least four phases when qualitative and quantitative can be integrated – sampling, data collection, data analysis, and interpretation (Teddlie & Tashakkori, 2009).

If the integration of qualitative and quantitative data is performed during the analysis phase, in that case quantitasing and qualitasing can be applied. Another way would be presenting qualitative and quantitative together by cross-tabulating qualitative themes against quantitative data by following a thread which entails using the initial results of one analysis to identify specific issues for in depth exploration across both datasets and analysing a mixed methods matrix in which the raws represent cases and different columns display the associated qualitative and quantitative data (Green, 2008; O'Cathain et al 2010, Sandelowski,

2000). The current research employed a mixed method design following the pragmatist approach.

Different to monomethod design in which only QUAL or QUAN approach is used, the current research will be adopting mixed methods designs. Mixed methods design uses QUAL and QUAN throughout the study (Teddie & Tashakkori, 2009). In relation to the strand of the research design, as the current mixed methods employs three phases (quantitative and qualitative interviews and focus groups) and incorporates a conceptualisation phase, experiential stage and inferential stage for each phase, it is intended to conduct mixed methods multistrand design, and the type of implementation used was parallel and multilevel (Teddlie &Tashakkori, 2009). The data was collected in a parallel manner during the first three phases and the last phase was conducted with members of staff of the University to answer interrelated research questions (Teddlie & Tashakkori, 2009). Multilevel designs are known to be set in hierarchical organisations (e.g., hierarchical structure within) in which data can be collected in different levels in order to answer closely related research questions (Teddlie & Tashakkori, 2009). The quantitative phase is a dominant in the current research, which makes the research quasi-mixed methods (QUAN→ qual).

Teddlie and Tashakkori (2009) suggest the selection of the design can be tailored according to the research. For example, a study by Kumagai and his colleagues (2004) initially was set to be a monomethod quantitative study with 1000 participants but by the end of the research the researchers had some emerging points they needed to explore and the research ended up being a three-strand time sequenced mixed methods research design.

Mixed method multistrand design studies include at least two strands QUAL and QUAN or more (Teddie & Tashakkori, 2009). Multilevel mixed design assumes that they can be both sequential and parallel, in case of this research parallel mixing occurs in multilevel of

analysis. QUAL and QUAN phases are integrated to answer closely related questions. Interviews and focus groups in the study are treated as complementary so the analysis and meta inferences are not fully integrated (Teddlie & Tashakkori, 2009).

Different to fully integrated mixed designs, in which integration happens in each stage: conceptualization stage, experiential stage (methodological), experiential stage (analytical) and inferential stage see figure 2, the present study only integrated the results at the end of each phase (Teddlie & Tashakkori, 2009).

In conclusion, the current research employed a mixed method design following a pragmatist approach in which two strands were used, qualitative and quantitative, to enable the researcher to answer the research questions proposed. Concurrent explanatory mixed method QUAN → qual design was employed, and the quantitative was dominant. It was suggested that quasi-mixed method multi strand multilevel design is applied as the phenomena was explored at different level (students, members of staff). The method selected was tailored according to the aims and the function of the research (Teddlie & Tashakkori, 2009). The research consisted of several phases. Phase I data, quantitative data collection. Phase II quantitative data collected in time 2. Phase III was interviews with university students and finally focus groups, Phase IV, with members of staff were organised. The design applied was concurrent explanatory mixed methods QUAN →qual, as the data was collected simultaneously for both qualitative and quantitative studies (Teddlie & Tashakkori, 2009) (see Figure 3.1 for graphic illustration of the research design).

The choice of the methods selected were less time consuming and it allowed the researcher to collect data simultaneously while the data for other phases were being collected. It allowed the researcher to evaluate, explore and explain those gaps which could not be explained by either of the strands used in the research. It also allowed the researcher to have the space to formulate the questions that were emerging to be answered. As more experience

and knowledge is required to successfully conduct concurrent research, at the same time it might be time consuming in case poor decision is made on qualitative research questions. Colleagues and the supervisors were consulted throughout the research.

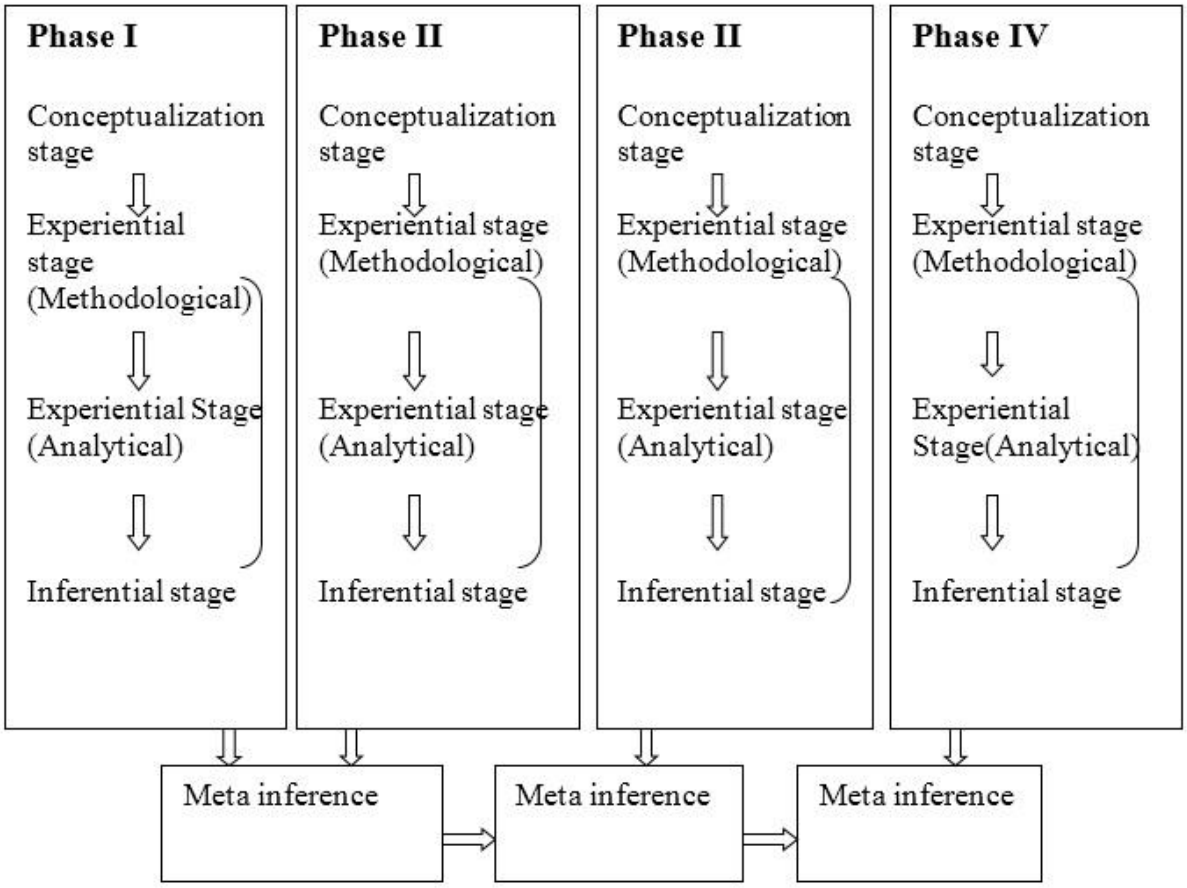

Figure 3.1. Graphic illustration of the current mixed methods study design

3.4 Ethics

The study was conducted according to The Code of Ethics and Conduct by The British Psychological Society (BPS, 2009) and The Code of Human Research Ethics (BPS,

2010). Ethical approval was obtained from The Research Centre of Applied Psychology ethics committee of the University of Bedfordshire.

Briefing, consent, deception, withdrawal, confidentiality and the debrief were the main ethical considerations for this research which were applied following four principles respect, competence, responsibility and integrity (BPS, 2009).

3.4.1 Briefing. When the first contact was made, the participants were informed about the aim of the project, the data collected, stages of the research and the time required to be spent by the participants. They were also briefed on confidentiality and anonymity of participation, their right to withdraw from the study and that their data would be destroyed in that case. The risks were identified to be distress and the participants were informed about contact details of student support and guidance services and the national helpline services. Participation in the research was set at a time convenient for the participants. The participants were told about the benefits of the research and the results would be made available. The participants were questioned about any religious or personal belief which stopped them from drinking alcohol as non-drinkers were not involved in the study (BPS, 2009).

3.4.2 Consent. The BPS Ethical Code of Conduct (2009) mentions that the participants should give their informed consent to participate in the study and give them an opportunity to understand the purpose of the research and be aware of any anticipated consequences. Each participant was given two consent forms in which the information about the research was provided. There is a potential opportunity to gaining personal sensitive information so obtaining consent is important (Teddlie & Tashakkori, 2009). In addition, an information sheet was handed out to participants who may have been interested in key articles used for this research purposes. As this study consisted of several phases and it was organised over a prolonged period of time, for each stage of the research supplemental informed consent was obtained. In addition, the nature of the phases was different and

required a consent form which was differently worded (for example, interviews needed a consent to be recorded). The consent form also had the contact details of the principal investigator and the supervisor in case there were cases when matter could not be satisfactorily resolved by the principal investigator (BPS, 2009; 2010).

3.4.3 Debrief. The participants were debriefed and the information sheet with key articles was distributed. The participants were informed about the results being available at the end of the research and who to contact if they were interested in receiving the information. The information sheet contained the telephone numbers to contact in case of distress (BPS, 2009; 2010).

3.4.4 Deception. Deception was not applied to the current study, as the purpose of the research was stated in the consent form (BPS, 2009).

3.4.5 Withdrawal. In the first contact with the participants they were notified about their right to withdraw from the study, and informed that in this case the data they had provided would be destroyed (BPS, 2009).

3.4.6 Confidentiality. The participants were informed that confidentiality and anonymity would be maintained during the research. The consent forms were kept in locked storage. As all the material handed to participants was kept anonymous, the participants' data could only be matched with the information they provided in each stage of the research: first school attended, city of birth, month of birth, star sign. No information which would make a participant identifiable was requested (e.g., dates of birth, names, signatures). In some cases, memorable words were used (BPS, 2009). Interviews and focus groups were conducted in rooms which were pre booked and at a time convenient for the participants.

The University of Bedfordshire is a multicultural setting. Special precautions were taken to respect the ethnic and cultural background of the participants. In case any concerns

and questions arose during the research, supervisory meetings were set to address those questions.

3.5 Chapter Summary

This chapter provides an overview of the mixed methods design used in the present study. The aim was to examine the components of the theories employed for the study by investigating the issues, drawing models to explain the alcohol consumption behaviour. The qualitative part of the research later was used to triangulate quantitative and qualitative data

The study was conducted with the use of a mixed method design and adopted a sequential explanatory design. The design drew four studies together to identify the significant components in alcohol consumption, exploring contextual contributors within student life. Phase I of the study was quantitative and explored the correlations between the variables, and the models helped to identify the relations between the components. Phase II assisted in identifying causal relations between the variables. Phase III, semi-structured interviews, provided further understanding of the phenomena. Phase IV- focus groups with members of staff, facilitated looking into the contextual reasons for alcohol use and addressed specific research questions.

The proceeding chapter identified gaps in the literature in understanding alcohol use based on the theories applied in this study. The theory of planned behaviour, the prototype willingness model, self-determination theory and social learning theory components have been researched but no previous study has explored the behaviour combining them all. Chapter III identified the need for further exploration of theories. Considering the gaps and the recommendations drawn in the previous chapter, it was aimed to conduct the present study.

The aim of Chapter 3 has been to provide information on the design selected in the mixed method study. The sections have covered the aims and objectives of the overall study, the research hypotheses and the rationale for mixed method research. Later in the chapter, the visual illustration for the overall study can be found. The chapter has finished with a description of each study accompanied by the aims, objectives, the hypotheses and the research questions addressed in each study.

Chapter Four: Pilot Study of the Research

4.1 Chapter Overview

This chapter presents the results of the pilot study, in which the reliability of measures, correlations between the study components and the results of the multiple regression are presented. Thus, the chapter is divided into several parts.

The first part of the chapter describes the aims and objectives of the pilot study, hypotheses, methodology and the study procedure. The second part of the chapter provides information about the results: reliability of the measures, correlations, multiple regressions.

4.2 Pilot Study

4.2.1 Aims and objective of a pilot study.

4.2.1.1 Aims of the pilot study.

Prepare effective measures and conduct initial quantitative analysis to identify significant contributors of alcohol use based on previous research

4.2.1.2 Objectives.

To select the most effective questionnaires based on literature review which have been used to measure the predictors within alcohol context

To collect data and analyse measures for reliability

To define inter-correlations

To run multiple regression analysis to check for the hypotheses of the study and find contributors of drinking to cope, alcohol consumption and alcohol related problems

4.2.2 Hypotheses to be tested.

H1 Social cognitive constructs of TPB will be predicted by motivational orientation.

H2 Changes in TPB and PWM component will contribute towards changes in intention and behaviour.

4.2.3 Participants. Students and professionals who currently drink alcohol formed the bases of the sampling pool for the pilot study. The participants were selected on a voluntary basis. The pilot study was conducted with 100 participants: male (n=59), female (n= 41) (Johanson & Brooks, 2010).

4.2.4 Study design. The main longitudinal questionnaire study (Phases I and II) will be based on within subject approach. Participants will be allocated on a voluntary basis. Interviews will be conducted with students (Phase III). Focus groups will be organised with university key personal (Phase IV).

4.2.5 Materials.

Oral briefing form (see Appendix A.1)

Information sheet with target articles and contact numbers for student support services (see Appendix A.2)

Alcohol unit information sheet (see Appendix A.3)

A consent form for participants (see Appendix A.4)

Questionnaire (see Appendix A.5)

4.2.5.1 Scales and measures.

The questionnaire included the following scales adapted to the context of the current study:

Theory of planned behaviour questionnaire (Ajzen, 2003; Norman & Connor, 2006). 15 item scale was used to measure perceived behavioural control (PBC1 and PBC 2), subjective norm, attitude, intention, outcome evaluation, control beliefs, normative beliefs, motivation to comply, behavioural beliefs, power of control factors.

Prototype willingness model questionnaire (Gibbons & Gerrard, 1995; 1997), 7 items measured previous behaviour, prototype, behavioural willingness and behavioural intention.

PLOC, Perceived Locus of Causality, by Goudas, Biddle, and Fox (1994) and Lafrenière, Verner-Filion & Vallerand (2012) was adapted and used to measure SDT components. Amotivation, external regulation, introjected regulation, identified regulation, intrinsic regulation was measured by the use of 19 item PLOC scale.

WHO Alcohol Use Disorder Identification Test (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001) will be used to measure drinking habits with 10 items.

Alcohol Effect Questionnaire (Rohsenow, 1983) which consists of 6 items measured alcohol expectancies.

Aspiration and competence in college work was measured with Warr's (1990) scale which consists of 12 items.

The Rosenberg Self Esteem Scale (Rosenberg, 1989) was used to measure students' general feeling about themselves.

Cybernetic Coping Scale (Edwards & Baglioni, 1993) (20 items) and Ways of Coping Check-List (Lazarus & Folkman, 1984) (4 items) will be used to measure frequency of strategy use in general.

General Health Questionnaire (GHQ 12) (Goldberg et al., 1997) was used to measure students' psychological well-being.

Extraversion, Neuroticism, Psychoticism and Lie scale (Eysenck & Eysenck, 1981). Twelve-item scale was used for measuring personality factors.

Drinking to cope (Polich & Orvis, 1979), 6-item, scale measured frequency of alcohol consumption events when it is used to cope with or manage negative emotions.

4.2.6 Procedure.

4.2.6.1 Ethical consideration. (see section 3.4 Ethics in Chapter 3)

4.2.6.2 Data collection. The data was collected during the summer of 2013 with the use of self-report questionnaires. Piloting 10 questionnaires revealed some difficulties in understanding a concept of prototypes and the questions related to this variable. The questionnaire was then improved by providing explanation of the concept.

It was aimed to collect 100 questionnaires for the pilot study (Johanson & Brooks, 2010). The students were approached in the University and professionals by e mail over a period of 3 months. The questionnaires were distributed and collected after half an hour.

4.2.6.3 Data analysis. The following steps were taken to meet the aims and objectives of the pilot study. Reliability analysis was performed for identification of internal consistency of scales used (see Table 4.1). Positive and negative worded items were computed accordingly. According to a rule of thumb the item loading with less than 0.4 should be discarded from the list (Brace, Kemp, & Snelgar, 2006).

After the reliability scores were identified Pearson Correlation was performed to find any positive or negative relations between predictor and outcome variables (see Table 4.1) r values 0 to 0.2, 0.3 to 0.6, 0.7 to 1 is considered to be weak, moderate and strong respectively (Brace et al., 2006).

Finally, in order to explore how much predictor variables contribute towards Criterion/outcome variables and the variance of the 3 models, stepwise multiple regression analysis was set up (see Tables 4.3, 4.4, and 4.5). In addition, the results were matched to overall research questions.

Whilst analysis within the pilot study was statistically based, the theory based SEM analysis was planned for the main study when enough data (min N-200) had been collected (Kline, 2005).

4.3 Results of Pilot Study

4.3.1 Sample description. The sample consisted of 100 students and professionals N=100, males N=59 (59%) and females N= 41 (41%). The participants' age varied from 18 to 50, mean age=29, Standard Deviation (SD=8.0).

4.3.2 Scale description. The scales in the questionnaire were assessed for internal consistency (See Table 4.1). As it can be seen from the table, the majority of the measures demonstrated acceptable reliabilities.

Table 4.1

Standard Deviations (SD) and Cronbach Alpha (α) for the scales of the current study

	Mean	Std. Deviation	Cronbach's α
gender	1.404	.493	
age	29.548	7.975	
tpbselfefficacy (self-efficacy)	18.607	6.406	.841
tpbcontrol (perceived behavioural control)	22.983	4.470	.618
tpbbehaveint (behavioural intention)	16.083	8.064	.986
auditproblems (alcohol related problems)	7.017	5.266	.824
auditconsumption (alcohol consumption)	3.000	4.034	.786
tpb1total (attitude towards drinking)	21.033	5.741	.713
tpb2total (subjective norm)	7.586	2.889	.659

copefix (problem focused coping)	14.339	3.320	.854
copeaccom (accomodation)	12.517	2.813	.670
copedeval (devaluation)	11.459	3.359	.830
copeavoid (avoidance)	10.617	4.026	.764
copetension (symptom reduction)	13.525	2.964	.687
copesocial (seeking social support)	13.229	3.471	.793
intrinsicmotivation (intrinsic motivation)	12.183	3.382	.908
idregulation (identified regulation)	12.623	3.342	.906
introjregulation (introjected regulation)	9.814	3.452	.873
externalregulation (external regulation)	7.724	2.846	.738
amotivation	5.500	2.151	.718
alcexptotal5 (alcohol expectancies)	2.361	1.517	.618
extraversion	17.136	2.915	.659
neuroticism	13.433	3.341	.667
selfesteem	31.950	6.347	.926
ghqtotal (general mental health)	11.450	4.401	.749
alccope (drinking to cope)	11.300	3.963	.821
typtotal (prototype of a drinker)	51.884	9.075	.747
simtotal (social comparison to a drinker)	56.275	8.888	.702
ndtotal (prototype of non-drinker)	54.656	8.916	.742
youndtotal (social comparison to a non-drinker)	55.362	8.748	.677

Note. The table above shows internal consistency for the scales are acceptable. Cronbach's Alpha is considered to be Excellent at $\alpha \geq 0.9$; Good at $0.9 > \alpha \geq 0.8$; Acceptable at $0.8 > \alpha \geq 0.7$; Questionable at $0.7 > \alpha \geq 0.6$; Poor at $0.6 > \alpha \geq 0.5$; Unacceptable at $0.5 > \alpha$ (Brace et al., 2006).

4.3.3 Correlations. The research investigated the correlations between predictor variables as defined by the models above against the outcomes of drinking to cope, alcohol consumption and alcohol related problems (see Table 4.2). Correlations have been performed to investigate the relation between variables. As one of the aims for the pilot study was to investigate the contributors to drinking to cope, alcohol related problems and alcohol consumption, this section reports the results of correlations regards outcome variables are described below (see sections 4.3.3.1, 4.3.3.2 and 4.3.3.3).

Table 4.2
Correlation Between Predictor and Three Outcome Variables

	Alccope	Auditconsumption	auditproblems
Gender	-.218’		
Age	-316’’	-.240’	-.267’
Tpbselfefficacy (self-efficacy)	.231’	.398’’	
Tpbcontrol (PBC)			
Tpbbehaveint (intention)	.380’’	.536’’	.243’
Auditproblems	.386’’	.631’’	
Auditconsumption	.409’’		.631’’
Tpb1total (attitude)			
Copefix (problem focused copign)			
Copeaccom (accommodation coping)			
Copedeval (devaluation coping)	.207’		
Copeavoid (avoidance coping)	.262’’	.221’	.303’’
Copetension (tension reduction)			
Copesocial (social support seeking)			
Intrinsicmotivation		-.315’’	-.308’’
Idregulation (Identified regulation)		-.331’’	-.379’’
Introjregulation (introjected regulation)		-.217’	
Externalregulation	.223’		
Amotivation	.323’’	.211’	.306’’
Alcexptotal5 (positive alcohol expectancies)	.501’’		
Extraversion			
Neuroticism	.289’’		.331’’
Seflesteem	-.297’’		
Ghqtotal (GHQ)	.379’’		
Alccope (drinking to cope)		.409’’	.386’’
Tpb2total (subjective norm)			

Note. *Correlation is significant at 0.05 level (2-tailed). **Correlation is significant at 0.01 level (2 tailed)

Detailed interpretation and the summary of correlation of three outcome variables drinking to cope, alcohol consumption and alcohol related problems presented below.

4.3.3.1 Contributors of drinking to cope. Drinking to cope significantly positively correlated with self-efficacy (r=.231, p< .05), behavioural intention (r=.380, p<.01), alcohol related problems (r=.386, p<.01), alcohol consumption (r=409, p<.01), devaluation (r=.207, p<.05), avoidance (r=.262, p<.01), amotivation (r=.323, p<.01), alcohol expectancies (r=.501, p<.01), neuroticism (r=289, p<.01) and general mental health (r=.379, p<.01). It significantly negatively correlated with gender (r=-.218, p<.01), age (r=-.316, p<.01) and self-esteem (r=-.297, p<.01). Interpreting the results, students who use alcohol to cope have higher level of self-efficacy towards alcohol consumption, and the intentions to drink. They drink more and they are likely to have more problems as a result of alcohol consumption. Mostly they use avoidance coping and devaluate the situation while trying to cope with problems. The people who use alcohol for coping are not convinced they need to be keeping alcohol consumption within safe limits.

The higher the expectancies are in regards to alcohol, the more students drink to cope. The students with higher neuroticism use alcohol for coping and have poorer general mental health. The older the student the less alcohol they use to cope. Students with high self-esteem tend to use alcohol less for coping purposes (see Table 4.2).

4.3.3.2 Contributors of alcohol consumption. Alcohol consumption significantly positively correlated with self-efficacy (r=.398, p<.01), behavioural intention (r=.536, p<.01), alcohol related problems (r=.631, p<.01), avoidance (r=.221, p<.05), amotivation (r=.211, p<.05) and drinking to cope (r=.409, p<.01). It significantly negatively correlated with age (r=-.240, p< .05), intrinsic motivation (r=-.315, p<.01), identified regulation (r=-.331, p<.01) and introjected regulation (r=-.217, p<.05). The results can be interpreted as follows: students who consume alcohol more score high in self-efficacy regards executing the behaviour and in

behavioural intention. They have more alcohol related problems. Additionally, they use avoidance coping and alcohol to cope. They do not see any benefit in keeping the alcohol consumption within safe limits. They do not have internally driven goals or enjoy when they drink less, or feel guilt or shame when they drink alcohol more than recommended. Finally, the older the students the less they drink, the more motivated they are to keep their alcohol consumption within limits, the less they consume alcohol (see Table 4,2).

4.3.3.3 Contributors of alcohol related problems. Alcohol related problems significantly positively correlated behavioural intention ($r=.243$, $p<.05$), alcohol consumption ($r=.631$, $p<.01$), avoidance ($r=.303$, $p<.01$), amotivation ($r=.306$, $p<.01$), neuroticism ($r=.331$, $p<.01$) and dinking to cope ($r=.386$, $p<.01$). It significantly negatively correlated with age ($r=-.267$, $p<.05$), intrinsic motivation ($r= -.308$, $p<.01$) and identified regulation ($r=-.379$, $p<.01$).

The results can be interpreted that students who possess behavioural intention to drink they consume alcohol, thus have alcohol related problems. They use alcohol for coping. People who have alcohol related problems tend to use avoidance coping. They score higher in neuroticism and they do not have amotivation towards keeping their consumption within safe limits. The older the people the less alcohol related problems they have. The people with high level of alcohol related problems are less internally motivated to keep their drinking within safe limits. They do not have an internally driven goal to do so or they do not enjoy keeping drinking within safe limits for particular reasons (see Table 4.2).

Correlation defined contributors towards three outcome variables drinking to cope, alcohol consumption and alcohol problems. Drinking to cope significantly positively correlated with self-efficacy, behavioural intention, alcohol related problems, alcohol consumption, devaluation, avoidance, amotivation, alcohol expectancies, neuroticism and general mental health. It significantly negatively correlated with gender, age and self-esteem.

Alcohol consumption significantly positively correlated with self-efficacy, behavioural intention, alcohol related problems, avoidance, amotivation and drinking to cope. It significantly negatively correlated with age intrinsic motivation identified regulation, introjected regulation. Alcohol related problems significantly positively correlated with behavioural intention, alcohol consumption, avoidance, amotivation, neuroticism and drinking to cope. It significantly negatively correlated with age, intrinsic motivation and identified regulation (see Table 4.2).

4.3.3.4 Biographical details. The results report gender significantly negatively correlated with Criterion/outcome variable drinking to cope (see Table 4.2). Age also negatively correlated with drinking to cope, alcohol related problems and alcohol consumption. The following results have been obtained on gender in relation to drinking to cope ($r=-.218^{*}$ $p<0.05$), and on age in relation to drinking to cope, alcohol related problems and alcohol consumption ($r=-0.316^{**}$ $p<0.01$; $r=-0.240^{*}$ $p<0.05$; $r=-0.267^{*}$ $p<0.05$ respectively). The results can be interpreted that female students use alcohol to cope less then male students. The older the students the less they use drinking to cope, thus less alcohol they consume. Consequently, the less alcohol related problems they have.

4.3.4 Regression analysis. On the final stage stepwise multiple regression analysis was carried out to define the contributors for the following Criterion/outcome variables: drinking to cope; alcohol related problems and alcohol consumption. The following predictor variables were entered into equation: age, gender, self-efficacy, perceived behavioural control, behavioural intention, attitude towards drinking, subjective norm, changing the situation, accommodation, devaluation, avoidance, symptom reduction, social support seeking, intrinsic motivation, identified regulation, external regulation, amotivation, alcohol expectancies, extraversion, neuroticism, self-esteem , general mental health, drinking to cope, alcohol consumption and alcohol related problems.

4.3.4.1 Age and gender. Regards to age and gender, regression analysis for three models showed that gender did not have any significance, whereas age positively correlated with drinking to cope. It can be interpreted older students use drinking to cope.

4.3.4.2 Prediction of drinking to cope. The first stepwise regression analysis was performed to identify the predictors of drinking to cope (see Table 4.3). The table below shows the multiple regression performed is significant to predict drinking to cope (R=.659 Rsq=.434, Adj Rsq=.407, F=16.102, df 3, 63, p<.001). The model predicted 43% of the variance. The contributors in the model were alcohol expectancies, age and amotivation. The result suggested increase in scores of drinking to cope would predict higher scores in alcohol expectancies, age and amotivation (see Table 4.3).

Table 4.3
Predicting Drinking to Cope From Alcohol Expectancies, Age and Amotivation Variables

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
(Constant)	-219.166	82.418		-2.659	.010
alcexptotal5	1.219	.230	.509	5.288	.000
Dobyears	.114	.042	.260	2.732	.008
amotivation	.378	.167	.218	2.264	.027

Note. Equation statistics: R=.659 Rsq=.434, Adj Rsq=.407, F=16.102, df3, 63. p<.001
Dependent Variable: alccope
Independent Variables: alcexptotal; dobyears; amotivation

4.3.4.3 Prediction of alcohol consumption. The second stepwise regression analysis was performed to define predictors of alcohol consumption (see Table 4.4). The multiple regression performed was significant to predict alcohol consumption (R=.750 Rsq=.562, Adj Rsq=.541, F=26.519, df 3, 62, p<.001). The model predicted 56% of the variance. The contributors in the model were behavioural intention, drinking to cope and identified regulation. The result suggested that students who had behavioural intention to consume alcohol, they drank alcohol. These students use alcohol to cope. Identified regulation, which

is motivation based on highly valued goals, negatively correlated with alcohol consumption (see Table 4.4).

Table 4.4
Predicting alcohol consumption from behavioural intention, drinking to cope and identified regulation variables

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
(Constant)	2.660	1.130		-2.353	.022
tpbbehaveint	.091	.022	.394	4.234	.000
Alccope	.186	.048	.348	3.853	.010
idregulation	-.163	.059	-.262	-2.786	.007

Note. Equation statistics: R=.750 Rsq=.562, Adj Rsq=.541, F=26.519, df3, 62. p<.001
Dependent Variable: auditconsumption
Independent Variables: tpbbehaveint; alccope; idregulation

4.3.4.4 Prediction of alcohol related problems. The third stepwise regression analysis was performed for identifying the predictors of alcohol related problems (see Table 4.5). The table below shows the multiple regression performed was significant to predict alcohol related problems (R=.712 Rsq=. 507, Adj Rsq=.491, F=30.864, df 2, 60, p<.001). The model predicted 51% of the variance. The contributors in the model were alcohol consumption and subjective norm. The result suggested the higher the scores in alcohol related problems the higher the scores in alcohol consumption and subjective norm (see Table 4.5).

Table 4.5
Predicting Alcohol Related Problems from Alcohol Consumption and Subjective norm variables

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
(Constant)	-4.994	1.326		-3.767	.000
Auditconsumption	1.371	.175	.744	7.848	.000
tpb2total	.328	.123	.253	2.665	.010

Note. Equation statistics: R=.712 Rsq=.507, Adj Rsq=.491, F=30.864, df2, 60. p<.001
Dependent Variable: auditproblems
Independent Variables: auditconsumption; tpb2total=

4.4 Discussion

The research covered most of the aspects considered in regards to alcohol use. The empirical research findings supported the aim and objectives of the research. The present research was based on and replicated the previous research by Hagger et al. (2012). The theory applied was social learning theory (Bandura, 1977). The theory explained more than half of the variance in relation to alcohol consumption (Durkin et al., 2005).

Selection of the variables when compared with research by Hagger et al. (2012) included extra variables of personal traits (neuroticism and extraversion), self-esteem, prototypes, coping, alcohol expectancies, problem drinking, general mental health and use of alcohol for coping. The contributors of drinking to cope, alcohol problems and alcohol consumption have been identified.

4.4.1 General discussion. The outcome achieved for the study will contribute towards research in this area. The results demonstrated that TPB, PWM and SDT components could have a significant relation to predict drinking to cope, alcohol consumption and alcohol related problems. The main objectives of this study were to identify the main contributors and the variance, which predicts Creterion/ outcome variables: drinking to cope, alcohol consumption, alcohol related problems, relation between all the variables.

4.5 Summary of the Main Results in Relation to Aims and Hypotheses

In relation to the four research hypotheses of the study H1 "Social cognitive constructs of TPB predicted by motivational orientation" the results showed identified regulation and behavioural intention were true contributors of alcohol consumption. H2 "Changes in TPB and PWM component will contribute towards changes in intention and behaviour" behavioural intention contributed to alcohol consumption and subjective norm to alcohol related problems. H3 "Relationship between controlled motivation (external regulation and introjected regulation) and alcohol consumption is mediated by subjective norm" and H4 "Past behaviour and prototypes are moderators within the framework suggested by Hagger et al. (2012) have not been explored. More data is required for SEM analysis.

The outcome of the pilot study was in line with the hypotheses of the current research, as results pointed to the significant contribution of the variables towards students' drinking to cope, alcohol related problems and alcohol consumption. The correlations have reported a number of significant relationships between variables (see Table 4.2). Multiple regression analysis has also shown clear significant contribution of variables in equation within 3 models (see Tables 4.3, 4.4 and 4.5).

However, there were many significant relations between variables in the correlation analysis, a limited number of variables were shown to be affecting the outcome variables drinking to cope, alcohol related problems and alcohol consumption.

In respect to drinking to cope, multiple regression defined the true contributors of drinking to cope in relation to the variables included in the study to be alcohol expectancies, age and amotivation only. The model predicted 43% of the variance (see Table 4.3). This particular outcome variable was not used by Hagger et al. (2012), but it is in line with the findings of Cooper and Russell (1988). They reported similar results, positive alcohol

expectancies and avoidant style of coping predicted 25% of the variance in drinking to cope. The results complement the current research. Significant contributors were positive alcohol expectancies and an avoidant style of coping with emotion.

The second model of alcohol consumption was conducted and multiple regression analysis revealed the variance for the model to be 51%. The significant contributors were behavioural intention, drinking to cope and identified regulation (see Table 4.4). Very similar results were reported by Sale et al. (2005) when alcohol expectancies predicted variance in alcohol consumption. In his study, drinking to cope was a significant contributor to the model. As regards motivation, Hagger et al. (2012) found identified regulation to be a significant contributor for people to keep alcohol consumption within safe limits.

Multiple regression for the third model defined the true contributors of alcohol related problems to be alcohol consumption and subjective norm only. The model predicted 51% of the variance (see Table 4.5). The results support previous research (French & Cooke, 2012) in which alcohol consumption was predicted by subjective norm and approval of alcohol consumption by peers.

The pilot study confirmed that the variables selected can be examined together. For example, amotivation predicted significant variance in drinking to cope. In addition, intrinsic motivation, identified regulation and introjected regulation were significant predictors of alcohol consumption in zero order correlation. Further investigation of this issue might reveal more information, as at this stage the results were based on only a sample size of 100 (n=100). More data will enable the construction of models using structural equation modelling and find relation between the variables. For example, moderators and the variance they predict within models.

4.6 Conclusion

The present study is investigating the variables which contribute to students' alcohol consumption. It is based on the models used by Hagger et al. (2012) who included variables based on TPB and SDT. The theoretical base for the study is social learning theory (Bandura, 1977). The current research model included the components of the theories mentioned and extended the research by Hagger et al. (2012) by adding extra components into the equation.

The main objective of the pilot study was to investigate the components which predict students' drinking to cope, alcohol consumption and alcohol related problems based on their attitudes, beliefs, motivation, personality characteristics. Based on the result of the pilot study the questionnaire was shortened and the significant contributors were to be included in the main study. Alcohol consumption was explored using interviews among students and focus groups with key personal of the University.

In conclusion, the present study will make a contribution towards the research covered within alcohol consumption among university students. The results of the research can be used to conduct consultancies at the University of Bedfordshire, as well as other universities in the UK.

Chapter Five: The Questionnaire Design

5.1 Introduction

This chapter describes the questionnaire designed for the current research based on the previous research undertaken. The first part of the chapter outlines the decision made to select the measures. Second part gives a rationale for choosing the measures and describes the ways some of the measures have been adapted for the purpose of this research. In addition, the description of the variables and the items to measure each of them is presented in this chapter.

5.2 Combining the Theories

Based on the literature review undertaken on alcohol use several theories have been selected for the questionnaire construction. The aim was to check for different models including the variables, which showed to be significant contributors of alcohol use. Prototype willingness model components have been added as the previous empirical studies showed its significant contribution to the behaviour. Although PWM was used in predicting adolescent behaviour (Rivis et al., 2006) and showed to be more predictive of male behaviour (Rivis et al., 2011) than female behaviour (Todd & Mullan, 2011). It was selected as at that time there was a limited amount of empirical studies done on PWM. Currently published meta-analysis on utility of PWM is in favour of using the theory for older populations (Todd et al., 2014).

Theory of planned behaviour has been widely researched in prediction of health behaviours (Conner & McMillan, 1999; Sheeran & Orbell, 1999;). In relation to alcohol use it predicted a variance of which varies from 33% (Rivis et al., 2006) to 73% (French & Cooke, 2012). Another reason for selecting this particular theory was to improve its predictability by adding extra variables (Ajzen, 2011).

Self-determination theory was mostly used within education (Black & Deci, 2000; Deci, Vallerand, Pelletier, & Ryan, 1991), researchers started to apply it to the health behaviours (Hagger et al., 2012). Following Hagger et al. (2012) it was decided to include SDT components and amotivation in the current study. Although, the theory has been used in health research there is still a gap to address as it recently a question of its being a linear process when measuring health related behaviours have been raised (Hagger & Chatzisarantis, 2009).

Personality factors have been added into the questionnaire, impulsivity, extraversion and neuroticism. These variables have been used in alcohol research. For example, extraversion showed to be contributing to the behaviour (Cooper, 1994). In addition, Ajzen (2011) suggested to use personality traits to improve the predictive utilities of TPB.

AUDIT and GHQ have been included in the questionnaire as they are reliable standardised measures used. The questionnaires of coping, expectancies and drinking to cope have been added following the studies of (Cooper & Rusell, 1988). Frequency, number of units and past behaviour are most commonly used measures in empirical studies (Bennett et al., 2013).

5.3 Construction of the Questionnaire

The questionnaire was constructed taking into account the population under investigation and the behaviour studied. The exploration of the behaviour and identification of the significant variables in the literature assisted in identifying the valid reliable existing measures. The measures, which have not been used within alcohol use context, have been adapted for the study. Thus the questionnaire for the study has been designed, as there were no questionnaires available including all the measures under investigation. The questionnaire

was constructed making use of the theories mentioned above. The discussion of the components of the theories is provided later in the chapter.

5.3.1 Instructions. The cover page for the questionnaire was designed to be an information sheet and the consent form. It provided the participants with information about the research, the time required to complete the questionnaire, information about the second wave of data collection. Participants were also informed about the any risks that might be involved in completing the questionnaire, which were defined as distress. The consent form included e-mail and phone numbers of student support services of the University of Bedfordshire, and the phone numbers of national helpline so that in a case of distress a student could make contact. The participants have been informed about voluntary participation and their right to withdraw from the study at any time, and the possibility of withdrawing the data they provided if they wish to do so. The consent form gave assurance about confidentiality of the information participants provide and that their anonymity will be maintained (BPS, 2009; 2011).

The information about first school they attended, city of birth, the month of birth and the star sign was requested to enable the researcher to match the data of 1st and 2nd wave which was planned to be collected in 3-month time (see the questionnaire in Appendix A5) (Bennet et al., 2013; Hagger et al., 2012).

5.3.2 Summary of the sections of the questionnaire. The questionnaire was comprised of 13 sections. Section 1 of the questionnaire was comprised of a series of questions about demographics. Sections 2 incorporated components of the prototype willingness model: prototype of a drinker, how likeable or dislikable it is and similarity to a drinker (3 items) (Gibbons & Gerrard, 1995, 1997). Section 3 contained 16 items to measure variables of the theory of planned behaviour (Francis et al., 2004; Todd & Mullan, 2011). Section 4 contained 10 items of WHO Alcohol Use Disorder Identification Test (Babor et al.,

2001) to measure drinking habits. Section 5 included a revised short 15-item Cybernetic Coping Scale (Guppy et al., 2004). Section 6 was constructed using PLOC, Perceived Locus of Causality scale (Goudas et al., 1994) to measure components of self-determination theory. This section consisted of 19 items. Section 7 was formed with 6 item scale of Alcohol Effect Questionnaire (Rohsenow, 1983) to measure alcohol expectancies. Section 8 only 12 items of Extraversion, Neuroticism, Psychoticism and Lie scale (Eysenck & Eysenck, 1981) was used to measure extraversion and neuroticism. Section 9 consisted of 5 items of Barratt impulsiveness scale (BIS 15). Section 10, was designed to measure drinking, as a means to cope and consisted of 10 items of Modified Drinking Motives Questionnaire- Revised (Modified DMQ-R) (Grant, Stewart, O'Conner, Blackwell, & Conrod, 2007). Section 11 incorporated General Health Questionnaire to measure wellbeing with 12 items (Goldberg et al., 1997). Section 12 consisted of 3 items of behavioural willingness (Gibbons & Gerrard, 1995, 1997). Final section 13 had 3 questions to identify frequency of drinking, units consumed in a single occasion and past binging behaviour (Prime Minister's Strategy Unit, 2003; Courtney & Polich, 2009; Bennett et al., 2013). Further the sections of the chapter describe the measures in more details (see the questionnaire in Appendix A5).

5.3.3 Demographics. The demographic information has also been included in the questionnaire: age, gender, marital status. The rest information requested was not used in analysis, but to match time 1 and time 2 data.

5.3.4 Behavioural measures. The behavioural measures were 3 questions in which participants provided self-reported answers to the questions which are described in 5.4.13.

5.3.5 Materials to be used with the questionnaire.

Oral briefing form (see Appendix A.1)

Information sheet with target articles and contact numbers for student support services (see Appendix A.2)

Alcohol unit information sheet (see Appendix A.3)

A consent form for participants (see Appendix A.4)

Questionnaire (see Appendix A.5)

5.4 The Sections of the Questionnaire

5.4.1 Demographics. The demographic questions asked were about age, gender, domestic status, employment, education, ethnicity and religion. Not all of the information was used in analyses as some of information used for matching data in time 1 and time 2, and there were no personal details requested to identify participants (see section 1 in Appendix A5).

5.4.2 Prototype willingness model. Prototype willingness model was designed and used widely among adolescents studies (Rivis et al., 2006). Although it was designed to be used for adolescents' studies, a study by Rivis et al. (2011), it showed to be predicting older driver's drinking and driving behaviour. Resent meta-analysis done by Todd et al. (2014) suggested using PWM within not only adolescents' studies but adults as they found significant contribution of prototype perception, evaluation and similarity in adults.

Prototype perception was measured using a set of adjectives (smart, confused, popular, immature, cool, self-confident, independent, careless, unattractive, dull, considerate

and self-centred) and the participants were asked to rate using seven-point scale 1 (*not at all*) and 7 (*extremely*).

Prototype favourability was measured by asking the participants "How likeable or dislikable do you think the type of person of your age who regularly engages in binge drinking would be". The participants rated the question on a seven-point scale 1 (*very likeable*) to 7 (*very dislikable*).

Prototype similarity was measured with 1 item ("How similar do you think you are to that typical person?") and rated on a seven-point scale 1 (*not at all similar*) to 7 (*very similar*).

PWM questionnaire (Gibbons & Gerrard, 1995; 1997). Several items measured previous behaviour (see Section 13 in Appendix A.5), prototype, behavioural willingness (see section 12 in Appendix A5) and behavioural intention (see section 3 in Appendix A5) the components of PWM (see section 3 in Appendix A5).

5.4.3 The theory of planned behaviour. TPB questionnaire (Ajzen, 2003; Norman & Connor, 2006). Sixteen-item scale was used to measure attitudes, subjective norm, self-efficacy, perceived behavioural control (PBC1 and PBC 2) and intention. Francis et al. (2004) offered manual for creating a scale to measure different health behaviours. The manual offers the ways to tailor the questionnaire according to health behaviour. For the purpose of current research, the questionnaire, which was adopted from a study by Todd, and Mullan (2011), which was used in alcohol study with student population (see section 3 in Appendix A.5).

Attitude have been measured using seven – point scale with the bipolar adjectives in response. The common statement for one item was "Engaging in a binge drinking session in the next two weeks would be". The item measured attitudes towards drinking by rating

paired adjectives: *bad-good, harmful-beneficial, pleasant–unpleasant, enjoyable-unenjoyable, healthy–unhealthy*. The items had satisfactory internal consistency (α = .88).

Subjective norm was measured with the use of two items (e.g., "Most people who are important to me (e.g., family, friends, significant others, etc.) would approve/disapprove of me engaging in a binge drinking session in the next two weeks") represented in a seven-point scale: *1 approve- 7 disapprove*. Internal consistency for this scale was adequate (α = .88). Subjective norm in this research needs to be considered as injunctive norms.

Self-efficacy was measured by 4 items from which 2 was measured using seven – point scale 1 (*not at all certain/not at all confident*) to 7 (*strongly confident*) (e.g., "How certain are you that you could engage in a binge drinking session in the next 2 weeks"). One of the items e.g., "If I wanted to, engaging in a binge drinking session in the next 2 weeks would be …") was measured using seven-point scale 1 (*easy*) to 7 (*difficult*). Internal consistency for 4 items was satisfactory (α = .88).

Perceived behavioural control was measured with the use of 4 items (e.g., "I feel in complete control over whether or not I engage in a binge drinking session in the next 2 weeks"). Seven-point scale was adopted from 1 (*strongly disagree*) to 7 (*strongly agree*). Internal consistency for the scale was adequate (α = .88).

Intention was measured with 4 items (e.g., "I intend to engage in a in a binge drinking session in the next 2 weeks") on seven-point scale ranging from 1 (*definitely*) not to 7 (*definitely*). Internal consistency for the scale was satisfactory (α = .88).

5.4.4 AUDIT. WHO Alcohol Use Disorder Identification Test (Babor et al., 2001) was used to measure drinking habits with 10 items. The measure taps into frequency of alcohol consumption (items 1-3), dependence symptoms (4-6), adverse reaction to alcohol consumption (items 7-8) and indicators of harmful alcohol consumption (items 10-11). The respondents rated their responses according to the question ("How often during the last year

have you found that you were not able to stop drinking once you had started") on a five-scale (*never, less than monthly, monthly, weekly* and *daily* or *almost daily*). For the research reasons first 3 questions have been used to identify amount, frequency and binging occasions. The rest 7 have been used for drinking problems. Additional binging occasions questions have been added to the questionnaire as male and female alcohol use differs. For example, "How often do you have 6 or more units on one occasion" was used for female and "How often do you have 8 or more units on one occasion" for male to identify frequency of binging occasions (see section 4 in Appendix A.5).

5.4.5 Coping. A revised short 15-item Cybernetic Coping Scale (Guppy et al., 2004) of Edwards & Baglioni (1993) (20 items) and Ways of Coping Check-List (Lazarus & Folkman, 1984) (4 items) were used to measure frequency of strategy use in general. Coping styles: change the situation, accommodation, devaluation, avoidance and symptom reduction were measured with 15 questions. Participants rated the statement on five-point scale, 1*(never*) to 5 (*always*) (see section 5 in Appendix A.5).

5.4.6 Self-determination theory. PLOC, Perceived Locus of Causality, by Goudas et al. (1994) and Lafrenière et al. (2012) was adapted and used to measure SDT components. Amotivation, external regulation, introjected regulation, identified regulation, intrinsic regulation was measured with the use of 19 item PLOC scale. The PLOC scale was mainly used for physical activity (Chatzisarantis, Hagger, Biddle, Smith, & Wang, 2003; Vallerand, 2007) or other positive behaviours (Keatley, Clarke, & Hagger, 2012). It was decided to adapt the questionnaire used in gaming for the purpose of the current study (Lafrenière et al., 2012), in which wording "I keep alcohol within safe limits because" was adopted from Hagger et al. (2012) (see section 6 in Appendix A.5).

Autonomous and controlled forms of motivation have been measured using Ryan and Connell's (1989) PLOC scale. The questionnaire has been adopted from Lafrenière et al.'s

(2012) study. In addition to the motivation amotivation have been added. The motivation regards keeping alcohol within safe limits have been measured with items of autonomous form of motivation: intrinsic motivation (e.g., "I keep my alcohol drinking within safe limits because I enjoy keeping my alcohol drinking within safe limits"). Identified regulation (e.g., "I keep my alcohol drinking within safe limits because I value the benefits of keeping my alcohol intake within safe limits") was measured. Controlled forms of motivation introjected regulation (e.g., "I keep my alcohol drinking within safe limits because I feel ashamed when I do not keep my alcohol drinking within safe limits") and external regulation (e.g., "I keep my alcohol drinking within safe limits because other people say I should") were measured in the present study. Amotivaion towards not keeping alcohol consumption within safe limits (e.g., "It is not clear anymore; I sometimes ask myself if it is good for me to keep alcohol drinking within safe limits"). Each motivation consisted of 4 items except for amotivation, which was 3. The responses were scored in four-point scale, ranging from 1 (*not at all true*) to 4 (*very true*). Internal consistencies for the scales were intrinsic motivation ($\alpha = .88$), identified regulation ($\alpha = .88$), introjected regulation ($\alpha = .88$), external regulation ($\alpha = .88$), amotivation ($\alpha = .88$).

5.4.7 Alcohol expectancies. Alcohol Effect Questionnaire (Rohsenow, 1983) which consisted of 6 items measured alcohol expectancies. The questionnaire is aimed to measure positive alcohol expectancies ("Drinking makes the future seem brighter") with four-point scale ranging 1 (*strongly agree*) to 4 (*strongly disagree*) (see section 7 in Appendix A.5).

5.4.8 General feeling. Extraversion, Neuroticism, Psychoticism and Lie scale (Eysenck & Eysenck, 1981). Twelve-item scale was used for measuring personality factors: extraversion and neuroticism. For example, extraversion ("Do you like plenty of excitement and bustle around you") was measured with four-point scale ranging 1 (*almost never*) to 4 (*almost always*) (see section 8 in Appendix A.5).

5.4.9 Impulsivity. Impulsivity scale was adopted for the study was a short version of Barratt's impulsiveness scale (BIS 15) (Spinella, 2007). Although the author did not report the reliability for the 5 item motor impulsivity, the four item motor impulsivity of Barratt's Impulsiveness scale was reported to have alpha=.75 when checked within adult population (Coutlee, Politzer, Hoyle, & Huettel, 2014). Five items measuring motor impulsivity ("I act on impulse") have been selected to use. For each question ("I act on impulse") respondents used four-point scale to rate, 1 (*rarely/never*) to 4 (*almost always*) (see section 9 in Appendix A.5).

5.4.10 Alcohol consumption and coping (Section 10). Drinking to cope was measured with revised version of five-factor Modified Drinking Motives Questionnaire-Revised (Modified DMQ-R) (Grant et al., 2007). Social, coping-anxiety, coping-depression, enhancement and conformity items, altogether 10 items were selected according to their factor loadings in previous research (Grant et al., 2007). The participants scored with 5-point scale 1 (*almost never*) to 5 (*almost always*) (see section 10 in Appendix A.5).

5.4.11 Well-being in general life (General Health Questionnaire 12 item version). The 12 scale measure covers the symptoms like strain, depression and loss of sleep (Goldberg Williams & Williams, 1988). The participants scored the questions ("Have you recently been able to concentrate on whatever you are doing") with 4-point scale 0 (*better than usual*) to 3 (*much less than usual*) (see section 11 in Appendix A.5).

5.4.12 Willingness to drink. Willingness to drink was measured with 3 items. A party scenario was presented and participants rate their responses to questions ("How willing would you be to say no") on a seven-point scale, 1 (*not at all willing*) to 7 (*very willing*).

Willingness to drink was measured with 3 questions. The context was set prior to the questions in which the participants were asked to imagine being in a party on a Saturday night and they have already consumed enough drinks. Someone is offering drinks, which the

person is paying for, as it is his /her birthday. “Would you have 1 or 2 more drinks?”, “Would you drink to get drunk?” and “How willing would you be to say ‘No thanks?’”. The participants rated the answers with seven-point scale from 1 (*not at all willing*) to 7 (*very willing*) (see section 12 in Appendix A.5).

5.4.13 Alcohol consumption. Self-reported frequency of drinking, units consumed in a single occasion and past binging behaviour was measured with 3 items: “How many days in the previous week did you drink alcohol”, “What was the most number of drinks you consumed in single occasion within last week”, “How many times within last 6 months have you consumed 7 or more units on one occasion” (see section 13 in Appendix A.5).

Binge drinking, heavy drinking on a single occasion, was reported to be the measure which has not been generally agreed (Bennet et al., 2013) and different studies adopted different ways to report binge drinking. In the UK sensible drinking was defined as having 21 units for men and 14 for women within a week, every unit equals 10 ml of pure ethanol. Later in 1995 the limit was revised and recommended daily amount was introduced which was 3-4 units for men and 2-3 for women (Department of Health, 1995; Health Education Authority, 1996). Weekly alcohol intake still should not exceed more than 21 units for men and 14 for woman. In the literature it might be found that several scholars used threshold of 7 units for women and 10 units for man being half of the weekly allowance (Norman & Conner, 2006), others used 6 units for female and 8 for male based on the (Cooke et al., 2010). The definition for 6/8 was mentioned in Prime Minister’s strategy group document (Prime Minister’s Strategy Unit, 2003). In addition, 7/10 was reported to exceed legal drinking and driving limit and showed to be increasing accidental injuries (Paton, 1988). Knowing most of the students do not have knowledge of recommended alcohol intake (Cooke et al., 2010), the students in the study have been provided with information sheet explaining the daily recommended intake (Bennett et al., 2013) and unit information. They were informed about the numbers of

drinks to be consumed binging, which is 6 units for female and 8 units for male to be drunk in a single occasion (Prime Minister's Strategy Unit, 2003).

Bennett et al. (2013) confirms that the most accurate ways of obtaining information about drinking is to ask participants about the alcohol consumed within last week. Thus frequency and the amount consumed was about last week's alcohol consumption.

Courtney and Polich (2009) underlines the importance of using timeframe is to define and differentiate between *binge drinking*, *alcoholism* and *alcohol dependence*. The drinking timeframe used in the studies were: past week (Kokavec & Crowe, 1999), past 2 weeks (Wechsler et al., 1994), past 30 days (Okoro et al., 2004; Ziegler et al., 2005) past 6 months (Hartley Elsabagh, & File, 2004; Townshend & Duka, 2002, 2005; Weissenborn & Duka, 2003) and past year (Cranford et al., 2006). Courtney & Polich, (2009) defines 6-month timeframe to be most accurate and informative to enable to assess for alcohol consumption and alcohol related problems (Hartley et al., 2004; Townshend & Duka, 2002, 2005; Weisenborn & Duka, 2003). Two-week period to assess binge drinking found to be underestimating binging prevalence (Vik, Tate, & Carello, 2000). Labrie, Pedersen, and Tawalbeh (2007) found that 1/3 of the nonbinge drinkers during 2 weeks' period were in the middle of the month were classified as binge drinkers or frequent binge drinkers during the first 2 weeks of the month. Use of the 2-week timeframe would exclude 30% of binge drinkers (Courtney & Polich, 2009). Courtney and Polich (2009) defines 6-month period to be timeframe which would cover holiday time during which students tend to drink more. Longer period has not yet been considered as it might reduce accuracy in the self-report amount of alcohol consumed.

Bennett et al. (2013) confirms that the most accurate ways of obtaining information about drinking is to ask participants about the alcohol consumed within last week. Thus frequency and the amount consumed was about last week's alcohol consumption.

Most of the measures selected were standardised measures. The ones which were adapted (e.g., PLOC) were evaluated by checking for their reliability during the pilot study. After the pilot study some changes were made to the instructions to some of components of TPB and PWM, as it was difficult for participants to understand the concept of some of the variables. This difficulty was mentioned in previous research (French et al., 2007)

5.5 Chapter Summary

This chapter has provided with a rationale for using measures selected for the study. The study adopted the prototype willingness model (Gibbons & Gerard, 1995. 1997), the theory of planned behaviour (Azjen, 1991), drinking habits (Babor et al., 2001), coping strategies (Guppy et al., 2004), self-determination theory (Goudas et al., 1994), alcohol expectancies (Rohsenow, 1983). Personality characteristics (Eysenck & Eysenck, 1981), impulsivity (Spinella, 2007), drinking to cope (Grant et al., 2007), general wellbeing (Goldberg Williams, & Williams, 1988), drinking frequency, units and past binging (Bennet et al., 2013) were added. The exploration of this variable enabled to draw models incorporating the variables, which showed to be a significant contributors of the drinking behaviour.

Chapter Six: Phase I Quantitative Analysis of Cross-Sectional Research

6.1 Introduction

This chapter reports about the methods and findings of the quantitative part of the mixed methods study within Phase I. Phase I was set to examine the relationship between the variables used in the study. The relationship is investigated based on several hypothesised models based on the previous research. This aim was to check for the significant relationships between the components, mediation and moderation effects. The chapter begins (Section 6.2) with a description of the research methods, design of the study, sampling methods, sampling size selected for the study, measures used, data collection and analyses strategies employed. Sections 6.3 provides descriptive statistics for the sample of the study. Section 6.4 provides information about the sample. Section 6.5 reports the findings of quantitative analysis, providing reliability for the measures, correlations between the variables, models and the significance levels of the interactions between the components and variance predicted as well as the significant moderators. Summary for Chapter 6 is 6.6.

6.2 Methods

6.2.1 Quantitative design. To enable the examination of variables from TPB, PWM, SDT, social learning theory constructs and personality factors rather large sample have been selected to perform structural equation modelling (SEM), as minimum of N=200 is needed (Kline, 2015). Considering the lack of longitudinal studies investigating a number of theories, the study conducted was a longitudinal study. The quantitative data was analysed and tested for evidence of statistical associations between the variables using time 1 data collection, which was cross-sectional.

6.2.2 Phase I of alcohol study. Phase 1 of the study aimed to check for reliabilities of the measures used, define correlations between the components selected for the study and perform path models using SEM to check for hypotheses of the current study.

6.2.2.1 Sampling methods. Participants were recruited using the convenience sampling design (Teddlie & Yu, 2007). The target sample was students from eight departments within the University of Bedfordshire. The gender boost sample was designed to recruit additional female participants in the middle of data collection. An additional female sample was drawn from Social Work Department; the data collected was screened for non-drinkers. Approximately 5000 students were informed about the research and final data was comprised from 324 participants' responses. The sample size required for a longitudinal survey is N-294. This allows a power of 0.9, an effect size around 0.10 would be found significant at the p=.05 level within a multiple regression model with up to 23 predictors (Blood et al., 2010).

6.2.2.2 Sample size and response rate. Sampling plays an important role in mixed methods research and it is linked to the study design (Creswell & Plano Clark, 2007; Kemper, Stringfield, & Teddlie, 2003). Generally, the size of a quantitative sample would be larger than that of the smaller qualitative sample (Creswell & Plano Clark, 2007; Tashakkori & Teddlie, 2003). Teddlie & Yu (2007) mentioned about lack of sampling examples on concurrent mixed methods research. Although later, Teddlie and Tashakkori (2009) offer several types of sampling to be used in concurrent multi-level research. For the purpose of the current multi-level mixed methods research, convenience sampling was used for the quantitative part, interviews adopted homogenous sampling. Purposive sampling was used within focus groups (Teddlie & Yu, 2007).

6.2.2.3 Data collection. The data collection method chosen was self-report questionnaires, which had to be completed through a hard copy or online through Qualtrics (BPS, 2011). The data was collected over 2 months, from November 2014 to January 2015. Piloting the questionnaire revealed some mismatch in wording of the scales in relation to the questions and online version had to be improved by not forcing the answer to the questions, which were not relevant to some of the participants.

The participants were recruited by advertising the research at the beginning or the end of lectures and tutorials, by approaching them at the university premises and distributing a leaflet with online link to the questionnaire, by completing the questionnaires during the tutorials, advertising the research and putting the posters all around the university premises. To be able to advertise the questionnaires during lectures and tutorials, staff were contacted prior to the research taking place. The departments across 3 sites of the university were contacted: Luton campus, Bedford campus and Aylesbury campus. Departments involved in the research from Faculty of Creative Arts, Technologies and Science were: Department of Computer Science and Technology, School of Art and Design, Department of Media Arts and Production. Departments involved from Faculty of Health and Social Sciences: Department of Applied Social Studies, Department of Psychology, Department of Sports Therapy and Rehabilitation. The following departments of Business School were involved in the research: Management and Business Systems, Marketing Tourism and Hospitality, Accounting and Finance and School of Law. Faculty of Education and Sport: Department of English Language and Communication, Department of Teacher Education, Department of Education Studies, Department of Sport Science and Physical Activity. Initially, it was aimed to collect 300 questionnaires for Phase I.

The potential participants were informed about the nature of the research, the procedure and the inclusion/exclusion criterion had been developed and applied at this point.

The completion of the qualitative tool took about 30 minutes to complete. The participants were asked if they would like to take part in Phase II and Phase III interviews. If they agreed, the arrangements were set. The researcher provided them with the e-mail address to contact, if they were interested in participation in the following parts of the research.

Inclusion criteria for taking part in the research were: to be a student at the University of Bedfordshire and to be a drinker. Recruitment took place in the following order. The students meeting the inclusion criteria were invited to take part in the research. Before the questionnaire was completed, the participants were briefed and the consent was gained. The participants were provided an online link or a hard copy of the questionnaire. If participants wished to take part in the following parts of the research, the arrangements were set (BPS, 2009).

6.2.2.4 Measures used. See Chapter 5 for more detailed information on the measures used.

6.2.2.5 Data analysis. To address the hypotheses, a series of path models analysis have been performed for goodness of fit. Several path analytic models have been run using Amos 21. The hypothesised relationship of the models is shown in Figures 6.1 to 6.13. Single-indicator latent variables with error variance which is alpha reliability measured by (1-alpha) x variance. Thirteen separate analysis have been run to predict outcome variables, frequency, units consumed in a single occasion, AUDIT total, past binging behaviour, AUDIT consumption and AUDIT problems within different hypothesised models. Goodness of fit was assessed with the use of goodness-of-fit chi square. In order to make sound judgement of fit, knowing that chi square is sensitive to size of the sample and there is a probability to make type 2 error, other parameters have been evaluated to assess the models. For example, the comparative fit index (CFI), the non-normed fit index (NNFI), the standardised root mean squared residual (SRMSR), and the root mean square error of

approximation (RMSEA). CFI and NNF have a cut of value of .90 or above, .95 is preferable. In regards to SRMSR and RMSEA, a value of .08 or less is known to be predicting a well-fitted model (Browne & Cudeck, 1993; Hu & Bentler, 1999).

6.3 Sample Characteristics

6.3.1 Gender group profile. In Phase I, N=324 participants took part in the research: 161 males (50%), 159 females (50%).

6.3.2 Age profile. A total of 324 participants aged 18 to 58 have been involved in the research to complete the questionnaire, with a mean age of 23 years (SD=6.7). 10 participants chose not to answer question about their age (see Table 6.1 for age profile of the participants). Out of the total 338 questionnaires completed by participants, the data of 14 non-drinkers has been excluded from the research for not meeting the exclusion criteria, which reduced the sample size to N=324. In the middle of data collection there was a decision made to boost up the female sample. A slightly higher response rate was observed for males N= 161 (50.3%) compared to females N=159 (49.1%).

Table 6.1

Age of the Participants

	N	Min	Max	Mean	Standard Deviation
Age	314	18	38	23.31	6.736

6.3.3 Domestic status. Domestic status included married 7% (N=23), not married or cohabiting (but in a steady relationship) 25% (N=79), divorced or separated 2% (N=6) and single 65% (N=210) and 1.9% did not wish to answer this question. Domestic status was not included in the analysis.

6.3.4 Children. The participants' response showed 10% (N=32) had children and 90% did not. The percentage of the number of children participants had was: no children 92% (N=283), one child 2% (6), 2 children 3% (N=10), 3 children 2% (N=6).

6.3.5 University year. The sample comprised of first year 33% (N=101), second year 39% (N=120), third year 22% (N=66), Masters 5% (N=16), PhD students 1% (N=3) and 5.6% did not chose to answer this question.

6.3.6 Job outside college hours. The students who had a job outside of university hours: 51% of the students (N=160) were reported to have a job outside of college hours, while 49% of students (N=155) did not. Out of working students 10% (N=31) reported to have full-time and 44% (N=140) part-time jobs. Some of the participants (2.8%) did not wish to answer this question.

6.3.7 Part time or full time. In regard to employment, 44.8 % (N=145) of the participants were not in employment, 9.6 % (N=31) were on a full-time employment, 43.2% (N=140) on a part-time employment and 2.5% (N= 8) of the participants did not wish to answer this question (see Table 6.2 for employment status).

Table 6.2

Employment Status

Employment	Participants (%)
No job	44.8
Full-time	9.6
Part-time	43.2
Missing	2.5

6.3.8 Ethnicity. 72.3% (N=) of participants in the study were Caucasian, 15% (N=48) Afro-Caribbean, 9% (N=29) Asian, 1.9% (N=6) from other ethnic backgrounds and 2.8% (N=9) did not wish to answer this question.

6.3.9 Alcohol consumption. Identify frequency of alcohol use of the students, they were asked to select responses from the following: never, monthly or less, 2-4 times per month, 2-3 times per month, 4 or more times per week. Frequency of alcohol use was as follows: never 1% (N=3), monthly or less 30% (N=94), 2-4 times per month 36% (N=112), 2-3 times per month 23% (N=72), 4 or more times per week 10% (30). Four per cent (N=13) of the student chose not to respond to this question (see Table 6.3 for frequency of alcohol use).

Table 6.3

Frequency of Alcohol Use

How of do you have drink containing alcohol?	Participants (%)
Never	0.9
Monthly or less	29.0
2-4 times per month	34.6

2-3 times per week	22.2
4 or more times per week	9.3
Missing	4.0

6.3.10 Units consumed on a single occasion. The number of units consumed on a single occasion were reported to be 1 or 2 36% (N=117), 3 or 4 25% (N=82), 5 or 6 18% (N=57), 7-9 12% (N=38), 10 or more 5% (N=17), 4% (N=13) chose not to answer to this question (see Table 6.4).

Table 6.4

Number of Units Consumed in a Single Occasion

Number of drinks of alcohol consumed in a drinking session	Participants (%)
1 or 2	36.1
3 or 4	25.3
5 or 6	17.6
7-9	11.7
10 or more	5.2
Missing	4.0

6.3.11 Binging. To identify binging occasion students were asked to report how often they have 6 or more drinks on one occasion. Alcohol use over recommended limits was reported to be never 24% (N=77), less than monthly 30% (N=98), monthly 28% (N=90), weekly 12% (N=40), daily almost daily 2% (N=6), missing 4% (N=13) (see Table 6.5).

Table 6.5

Frequency of Binging

Binging (6 or more units in one occasion)	Participants (%)
Never	23.8
Less than monthly	30.2
Monthly	27.8
Weekly	12.3
Daily or almost daily	1.9
Missing	4.0

6.4 Findings

6.4.1 Reliability for measures used. The table above shows internal consistency for the scales are acceptable. Cronbach's Alpha is considered to be Excellent at $\alpha \geq 0.9$; Good at $0.9 > \alpha \geq 0.8$; Acceptable at $0.8 > \alpha \geq 0.7$; Questionable at $0.7 > \alpha \geq 0.6$; Poor at $0.6 > \alpha \geq 0.5$; Unacceptable at $0.5 > \alpha$. (Brace, Kemp, & Snelgar, 2006).

6.4.1.1 Prototype willingness model.

Table 6.6

Means, Standard Deviations and Reliability for the Prototype Willingness Constructs

Construct	Mean	Standard Deviation	Cronbach's Alpha (α =)
Prototype	45.926	10.392	.761

6.4.1.2 The theory of planned behaviour.

Table 6.7

Means, Standard Deviations and Reliability for the Theory of Planned Behaviour Constructs

Construct	Mean	Standard Deviation	Cronbach's Alpha (α =)
Attitude	16.120	6.494	.768 .
Subjective norm	9.765	3.381	.838
Self –efficacy	18.583	7.227	.851
Perceived behavioural control	24.277	5.276	.791
Intention	12.492	7.807	.944

6.4.1.3 AUDIT.

Table 6.8

Means Standard Deviations and Reliability for the AUDIT

Construct	Mean	Standard deviation	Cronbach's Alpha (α =)
AUDIT	17.652	5.430	.855

6.4.1.4 Coping.

Table 6.9

Means, Standard Deviations and Reliability for the Five Coping Styles

Construct	Mean	Standard Deviation	Cronbach's Alpha (α =)
Change the situation	10.175	2.631	.768
Accommodation	9.847	2.264	.678
Devaluation	8.414	2.755	.838
Avoidance	8.450	2.682	.746
Symptom reduction	9.959	2.371	.613

6.4.1.5 Self-determination theory.

Table 6.10

Means, Standard Deviations and Reliability for the Self-determination Theory Constructs

Construct	Mean	Standard Deviation	Cronbach's Alpha (α =)
Intrinsic motivation	11.342	3.703	.908
Identified regulation	12.049	3.455	.887
Introjected regulation	9.930	3.565	.860
External regulation	8.157	3.115	.785
Amotivation	5.580	2.384	.792

6.4.1.6 Alcohol expectancies.

Table 6.11

Means, Standard Deviations and Reliability for Positive Alcohol Expectancy Scale

Construct	Mean	Standard Deviation	Cronbach's Alpha (α =)
Positive alcohol expectancies	14.515	3.458	.742

6.4.1.7 Personality variables.

Table 6.12

Means Standard Deviations and Reliability for Personality Variables

Construct	Mean	Standard Deviation	Cronbach's Alpha (α =)
Extraversion	16.475	3.539	.763
Neuroticism	13.564	3.503	.663

6.4.1.8 Impulsivity.

Table 6.13

Means Standard Deviations and Reliability for Impulsivity Scale

Construct	Mean	Standard Deviation	Cronbach's Alpha (α =)
Impulsivity	10.542	3.343	.794

6.4.1.9 Alcohol consumption and coping (Section 10).

Table 6.14

Means Standard Deviations and Reliability for Drinking to Cope

Construct	Mean	Standard Deviation	Cronbach's Alpha (α =)
Drinking to cope	26.481	8.032	.865

6.4.1.10 Well-being in general life (General Health Questionnaire 12 item version).

Table 6.15

Means Standard Deviations and Reliability for General Health Questionnaire

Construct	Mean	Standard Deviation	Cronbach's Alpha (α =)
Wellbeing	23.025	5.436	.858

6.4.1.11 Willingness to drink.

Table 6.16

Means, Standard Deviations and Reliability for Willingness

Construct	Mean	Standard Deviation	Cronbach's Alpha (α =)

Willingness 2	7.753	3.818	.87

6.4.1.12 Alcohol consumption.

Table 6.17

Min, Max, Means and Standard Deviations for Frequency, Units Consumed in Single Occasion and Past Binging Behaviour

Construct	Min	Max	Mean	Standard Deviation
Frequency	.00	7.00	1.471	1.538
Units consumed in a single occasion	.00	50.00	5.838	8.919
Past binging	.00	172.00	10.298	21.415

6.5 Correlations

6.5.1 Gender. Gender showed significant positive correlation with intrinsic motivation, identified regulation, neuroticism, GHQ and significant negative correlation with age, past binging, frequency and AUDIT.

6.5.2 Age. Age significantly positively correlated with expectancy and significantly negatively with past binging, AUDIT, Intention, tension reduction, amotivation, drinking to cope, GHQ and willingness.

6.5.3 Alcohol consumption. Frequency of alcohol use significantly positively correlated with units consumed in a single occasion, past binging, AUDIT, attitude, self-efficacy, intention, neuroticism, impulsivity, drinking to cope, GHQ and willingness.

Frequency significantly negatively correlated with subjective norm, intrinsic motivation, identified regulation, positive alcohol expectancies.

Units consumed on a single occasion significantly positively correlated with frequency of alcohol use, past binging, AUDIT, PWM, attitude, self-efficacy, intention, avoidance coping, devaluation coping, extraversion, impulsivity and drinking to cope. GHQ and willingness. The number of units consumed in a single occasion significantly negatively correlated with subjective norm, intrinsic motivation, identified regulation, introjected regulation, external regulation and positive alcohol expectancies.

Past binging significantly positively correlated with frequency, units, AUDIT, attitude, self-efficacy, intention, avoidance, devaluation, extraversion, neuroticism, impulsivity, drinking to cope, GHQ and willingness. Past binging significantly negatively correlated with subjective norm, intrinsic motivation, identified regulation and introjected regulation.

AUDIT significantly positively correlated with frequency, units, past binging, PWM, attitude, self-efficacy, intention, devaluation, amotivation, neuroticism, impulsivity, drinking to cope, GHQ and willingness. AUDIT significantly negatively correlated with subjective norm, PBC, intrinsic motivation, identified regulation, introjected regulation and positive alcohol expectancies (see Appendix B.26 for more correlations).

6.6 Path Models

Path models were hypothesised using the models form previous research by Hagger et al., (2012) (see Figure 6.1), Todd et al. (2014; 2016) (see Figure 6.2) and Simons, Gaher, Correia, Hansen, and Christopher (2005) (see Figure 6.3). First 5 models (models 1a, 1b, 1c, 1d, 1e) path analytic model of predicting frequency of alcohol use, path analytic model of units consumed in a single occasion, path analytic model of predicting AUDIT total, path

analytic model of prediction of past behaviour of binging, path analytic model of AUDIT consumption were hypothesised based on Hagger et al. (2012) (see Figures 6.4, 6.5, 6.6, 6.7, 6.8).

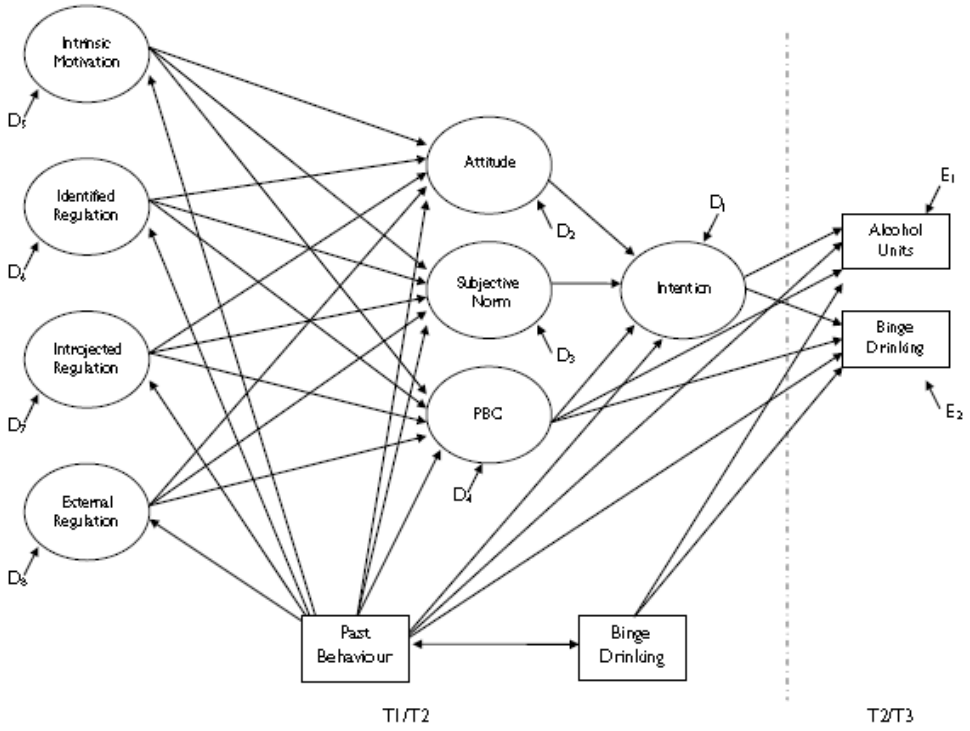

Figure 6.1. Path model for theory of planned behaviour and self-determination theory.

Reprinted from "Predicting alcohol consumption and binge drinking in company employees: An application of planned behaviour and self-determination theories," by M. S. Hagger, A. J. Lonsdale, V. Hein, A. Koka, T. Lintunen, H. Pasi, M. Lindwall, L. Rudolfsson & N. L. Chatzisarantis, 2012, *British journal of health psychology*, *17*(2), p. 393. Copyright 2011 by the British Psychological Society.

Path analytic model of predicting AUDIT consumption (model 2a) was based on Hagger et al. (2012) and Todd et al. (2014; 2016) (see Figure 6.9)

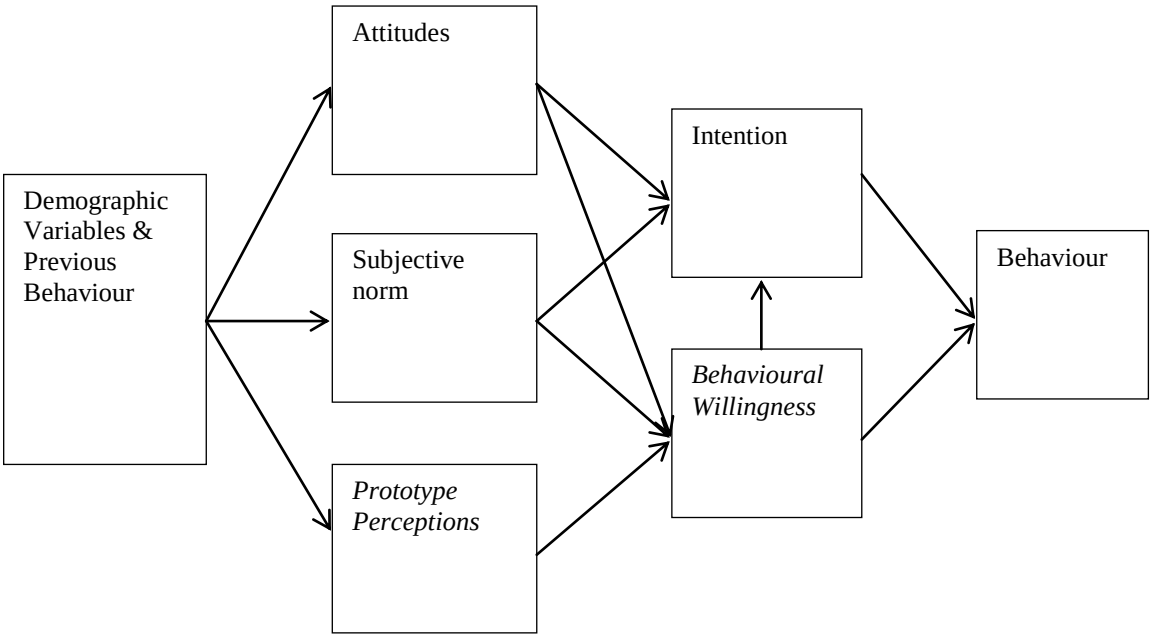

Figure 6.2. The prototype willingness model.

Reprinted from **"**Reasoned versus reactive prediction of behaviour: A meta-analysis of the prototype willingness model," by J. Todd, E. Kothe, B. Mullan, & L. Monds, 2016b, *Health psychology review, 10*(1), p. supplementary file 1. Copyright 2014 by Taylor & Francis.

The following model, path analytic model prediction of AUDIT problems (model 3a), was based on Simons et al. (2005) (see Figure 6.10).

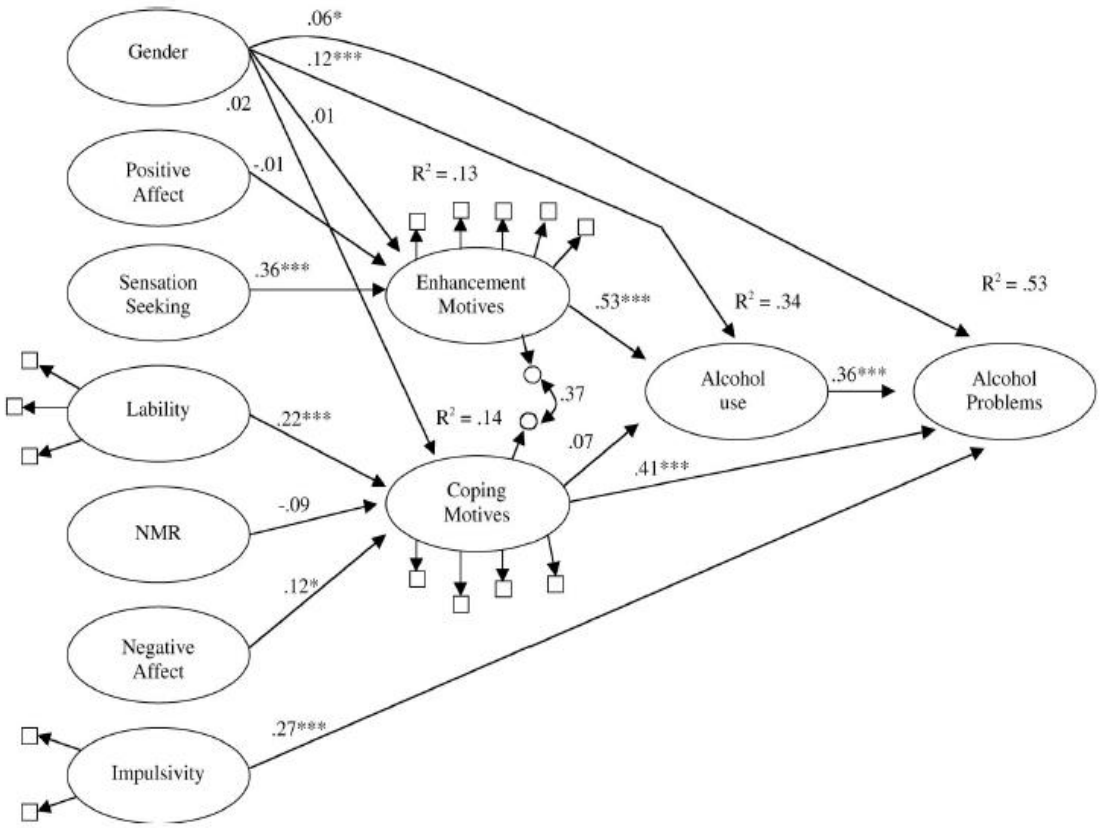

Figure 6.3. Structural model with personality variables

Reprinted from "An affective-motivational model of marijuana and alcohol problems among college students," by J. S. Simons, R. M. Gaher, C.J. Correia, C. L. Hansen, & M.S. Christopher, 2005, *Psychology of addictive behaviours, 19* (1), p. 331. Copyright 2005 by the American Psychological Association.

Models path analytic model of prediction of AUDIT consumption, AUDIT problems, AUDIT total, binge amount, frequency were (models 4a, 4b, 4c, 4d, 4e, 4f) based on Hagger et al. (2012) and Todd et al. (2014; 2016) (see Figure 6.1 and 6.2). It was decided to add amotivation to this set of models, as it was not researched (Caudwell & Hagger, 2015; Hagger et al., 2012) (see Figures 6.11, 6.12, 6.13, 6.14, 6.15, 6.16).

Previous research has been already applying several theories in the research (Caudwell & Hagger, 2015; Matterne, Diepgen, & Weisshaar, 2001; Todd & Mullan, 2011). SDT was previously used for educational research but recently it is widely applied within health related behaviours (Hagger & Chatzisarantis, 2009), as it is mediating the effect between social cognition models and intention (Hagger et al., 2012). Additionally, SDT is about improving person's wellbeing and health, by providing giving him the autonomy and confidence to perform health behaviours (Deci & Ryan 2000). The theories which have been selected for this study do have common variables which belongs to each other. For example, self-efficacy, one of the main components of social learning theory is about feeling competent to perform the behaviour (Bandura, 1977) and which person is encouraged about being intrinsically motivated (Deci & Ryan, 2000), as it is known that self-efficacy is seen as unitary construct within SLT (Badura, 1977), therefore Deci and Ryan (2000) argues that without accepting the influence of intrinsic involvement self-efficacy cannot be explored further. PWM has commonalities with TPB components, e.g., intention. Willingness, the component of PWM, has been adding variance to intention and sometimes it was the only component from PWM to be included in a number of previous research (Todd et al., 2016).

6.6.1 Model 1a path analytic model of predicting frequency of alcohol use. The model indicated excellent fit to the data ($\chi 2 = 16.92$, df = 12, p= .153; TLI = .976, CFI = .995, RMSEA = .036, PCLOSE =.703). The model predicted 52% of the variance in intention to behave but only 17% of the variance in frequency of drinking. Intention was a significant predictor of frequency ($\beta = .417$, $p < .001$). Also from the table, it can be seen that attitude ($\beta = .421$, $p < .001$) and self-efficacy ($\beta = .316$, $p < .001$) were strong predictors of intention. Subjective norm was also a significant predictor of intention ($\beta = -.115$, $p < .05$) though PBC just failed to significantly predict intention ($\beta = -0\ 87$, p=.061).

In terms of SDT elements, introjected regulation (β= -.314, p<.001) and external regulation (beta β = .142, p<.05) significantly predicted attitude. Identified regulation was the only predictor of subjective norm (beta β = .253, p =.013). Introjected regulation was the only predictor of self-efficacy (beta β = -.201, p<.05). External regulation was the only significant predictor of PBC (beta β = -.287, p<.001) (see Model 1a in Figure 6.4, Table 6.17 and 6.18).

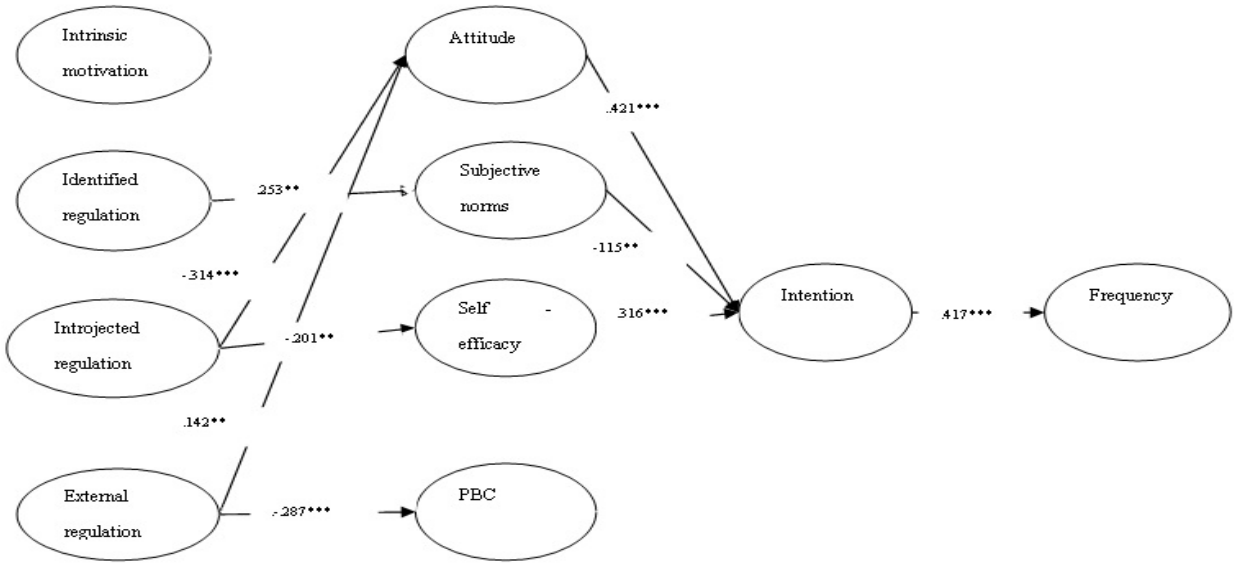

Figure 6.4. Path analytic model of predicting frequency of alcohol use.

(***p < .001, ** p<.05)

Table 6.18

Explained Variance in Dependent Variables

Variable	R2
PBCtotal4	.086
Slfefficacy	.123
Subjnorm	.107
Attitudetotal	.251
Intentiontotal	.508
Frequencyrecoded	.086
PBCtotal4	.123

Table 6.19

Standardized Path Coefficients for Path Model

Parameter			Estimate (β)	P
Attitudetotal	<---	intrinsic_motivation	-.156	.084
Attitudetotal	<---	identified_regulation	-.164	.084
Attitudetotal	<---	introjected_regulation	-.314	***
attitudetotal	<---	external_regulation	.142	.035
Subjnorm	<---	identified_regulation	.253	.013
Subjnorm	<---	intrinsic_motivation	.019	.846
Subjnorm	<---	introjected_regulation	.100	.253
Subjnorm	<---	external_regulation	-.034	.635
Slfefficacy	<---	intrinsic_motivation	-.071	.463
Slfefficacy	<---	identified_regulation	-.074	.468
Slfefficacy	<---	introjected_regulation	-.201	.021
Slfefficacy	<---	external_regulation	-.071	.324
PBCtotal4	<---	intrinsic_motivation	.132	.183
PBCtotal4	<---	identified_regulation	.062	.550
PBCtotal4	<---	introjected_regulation	-.091	.306
PBCtotal4	<---	external_regulation	-.287	***
intentiontotal	<---	Attitudetotal	.421	***
intentiontotal	<---	Subjnorm	-.115	.035
intentiontotal	<---	Slfefficacy	.316	***

intentiontotal	<---	PBCtotal4	-.087	.061
Frequencyrecoded	<---	Intentiontotal	.417	***

6.6.2 Model 1b path analytic model of predicting units consumed in a single occasion. The model indicated close fit to the data ($\chi 2 = 29.48$, df = 12, p= .003; TLI = .916, CFI = .982, RMSEA = .067, PCLOSE=.159). The model predicted 51 % of the variance in intention to behave but only 21% of the variance in units consumed in a single occasion. Intention was a significant predictor of frequency ($\beta = .460$, $p < .001$). Also from the table, it can be seen that attitude ($\beta = .422$, $p < .001$) and self-efficacy ($\beta = .316$, $p < .001$) were strong predictors of intention. Subjective norm was also a significant predictor of intention ($\beta = -.115$, $p < .05$) though PBC just failed to significantly predict intention ($\beta = -086$, p=.062).

In terms of SDT elements, introjected regulation ($\beta = -.315$, $p<.001$) was a strong predictor of attitude and external regulation ($\beta = -.287$, $p<.001$) was a strong predictor of PBC. External regulation ($\beta = .142$, $p<.05$) significantly predicted attitude. Identified regulation ($\beta = .253$, $p < .05$) significantly predicted subjective norm and introjected regulation ($\beta = -.202$, $p < .05$) significantly predicted self-efficacy (see Model 1b in Figure 6.5, variance explained and path coefficients for path models in Appendix B Table B1 and B2).

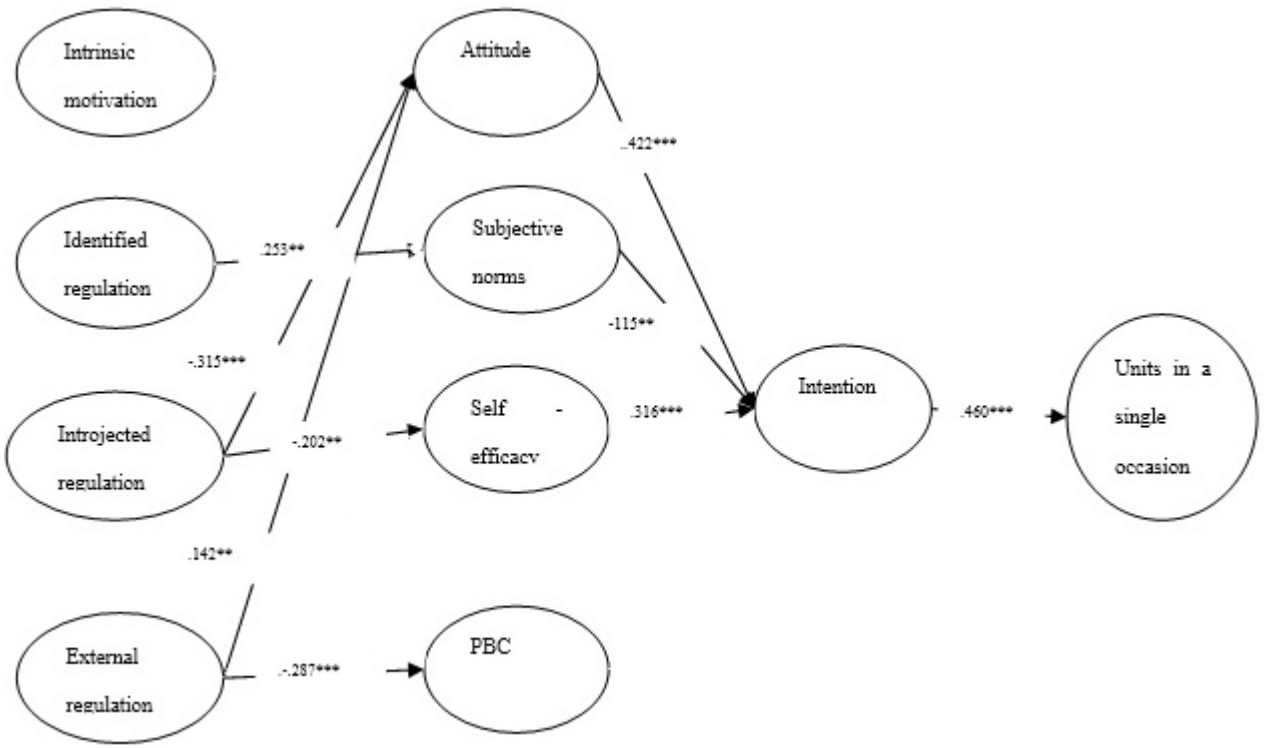

Figure 6.5. Path analytic model of predicting units consumed in a single occasion

(***p < .001, ** p<.05)

6.6.3 Model 1c path analytic model of predicting AUDIT total. The model indicated acceptable fit to the data ($\chi 2 = 50.36$, df = 12, p= .000; TLI = .825, CFI = .962, RMSEA = .099, PCLOSE=.002). The model predicted 50% of the variance in intention to behave but only 29% of the variance in AUDIT TOTAL. Intention was a significant predictor of AUDIT (β= .536, p <.001). Also from the table, it can be seen that attitude (β = .419, p <.001) and self-efficacy (β = .309, p<.001) were strong predictors of intention. Subjective norm was also a significant predictor of intention (β = -.123, p <.05) though PBC just failed to significantly predict intention (β = -.123, p=.071).

In terms of SDT elements, introjected regulation (β = -.313, p<.001) and external regulation (β =-.287, p<.001) showed strong significant prediction of attitude and PBC respectively. External regulation (β = -.313, p<.05) significantly predicted attitude. Identified regulation (β = .253, p<.05) was only significant predictor of subjective norm. Introjected regulation (β = -.200, p<.05) was only significant predictor of self-efficacy (see Model 1c in Figure 6.6, variance explained and path coefficients for path models in Appendix B Table B3 and B4).

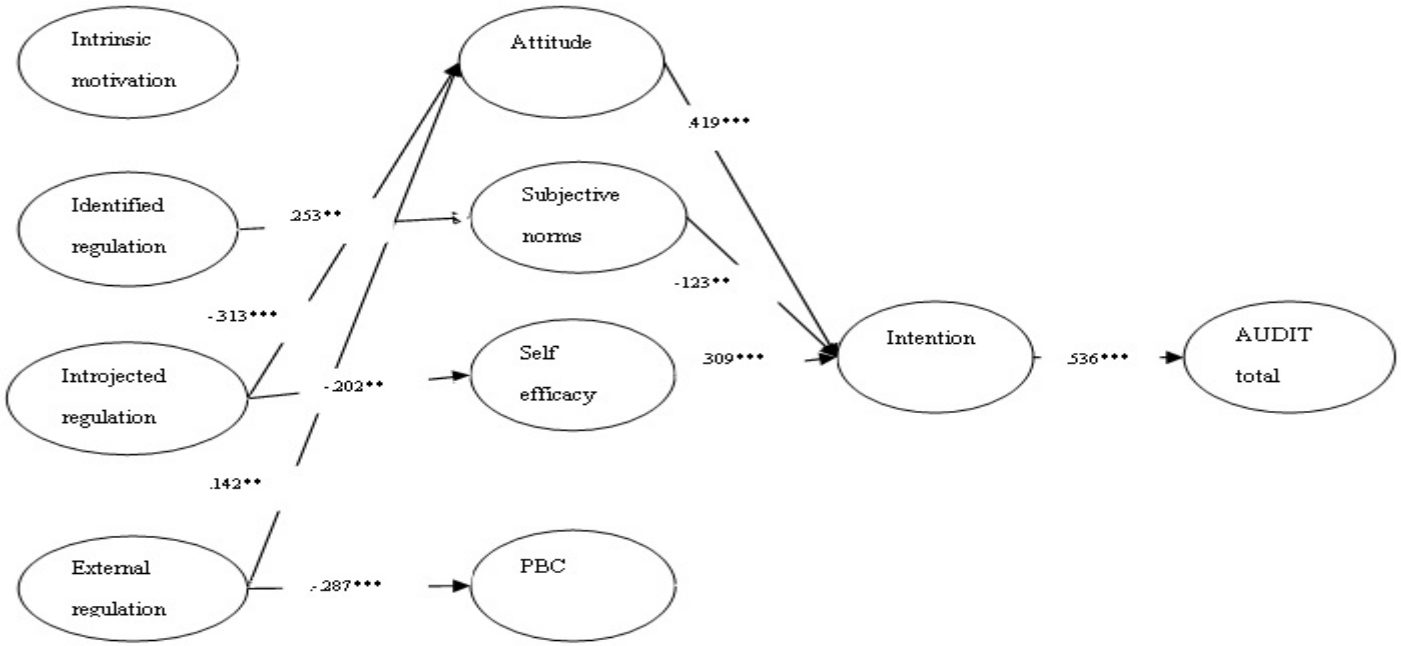

Figure 6.6. Path analytic model of predicting AUDIT total.

(***p < .001, ** p<.05)

6.6.4 Model 1d path analytic model of predicting past binging behaviour.

behaviour. The model indicated excellent fit to the data ($\chi 2 = 15.06$, df = 12, p= .238; TLI = .985, CFI = .997, RMSEA = .028, PCLOSE=.792). The model predicted 51% of the variance in intention to behave but only 16% of the variance in past behaviour. Intention was a significant predictor of past behaviour (β = .404, p <.001). Also from the table, it can be seen that attitude (β = .419, p <.001) and self-efficacy (β = .314, p<.001) were strong predictors of intention. Subjective norm was also a significant predictor of intention (β = -.120, p <.05) though PBC just failed to significantly predict intention (β = -.085, p=.065).

In terms of SDT elements, introjected regulation (β = -.315, p<.001) and external regulation (β = .142, p<.05) significantly predicted attitudes. Identified regulation was the only predictor of subjective norm (β = .253, p =.013). Introjected regulation was the only predictor of self-efficacy (β = -.201, p<.05). External regulation was the only significant predictor of attitude (β = .142, p<.05) (see Model 1d in Figure 6.7, variance explained and path coefficients for path models in Appendix B Table B5 and B6).

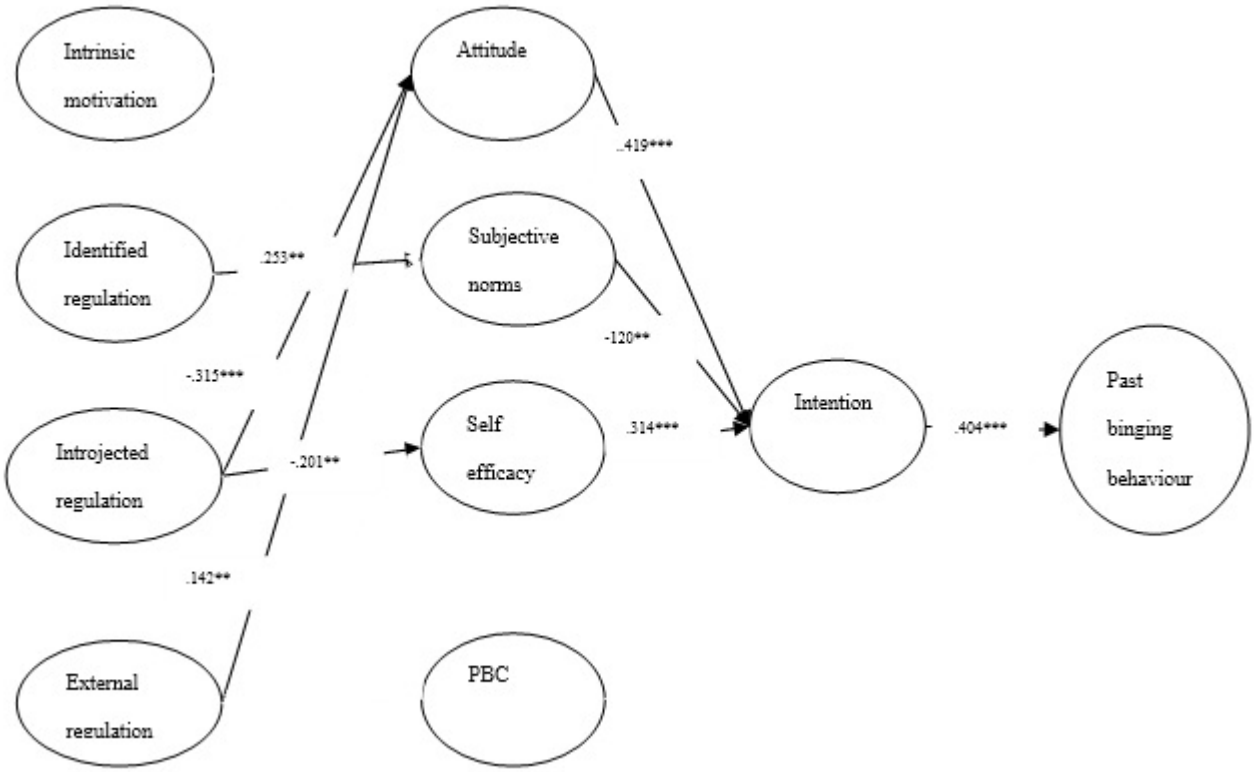

Figure 6.7. Path analytic model of predicting past behaviour of binging

(***p < .001, ** p<.05)

6.6.5 Model 1e Path analytic model of prediction of AUDIT consumption.

The model indicated close fit to the data ($\chi 2 = 30.64$, df = 12, p= .002; TLI = .916, CFI = .982, RMSEA = .069, PCLOSE=. 132). The model predicted 50% of the variance in intention to behave but only 35% of the variance in AUDIT consumption. Intention was a significant predictor of AUDIT consumption ($\beta = .589$, $p < .001$). Also from the table, it can be seen that attitude (beta = .417, $p < .001$) and self-efficacy ($\beta = .316$, $p < .001$) were strong predictors of intention. Subjective norm was also a significant predictor of intention ($\beta = -.116$, $p < .05$) though PBC just failed to significantly predict intention ($\beta = -.086$, p=.065).

In terms of SDT elements, introjected regulation ($\beta = -.319$, $p < .001$) and external regulation ($\beta = .142$, $p < .05$) significantly predicted attitudes. Identified regulation was the only predictor of subjective norm ($\beta = .251$, p =.017). Introjected regulation was the only predictor of self-efficacy ($\beta = -.205$, $p < .05$). External regulation was the only strong significant predictor of PBC ($\beta = -.287$, $p < .001$) (see Model 1e in Figure 6.8, variance explained and path coefficients for path models in Appendix B Table B7 and B8).

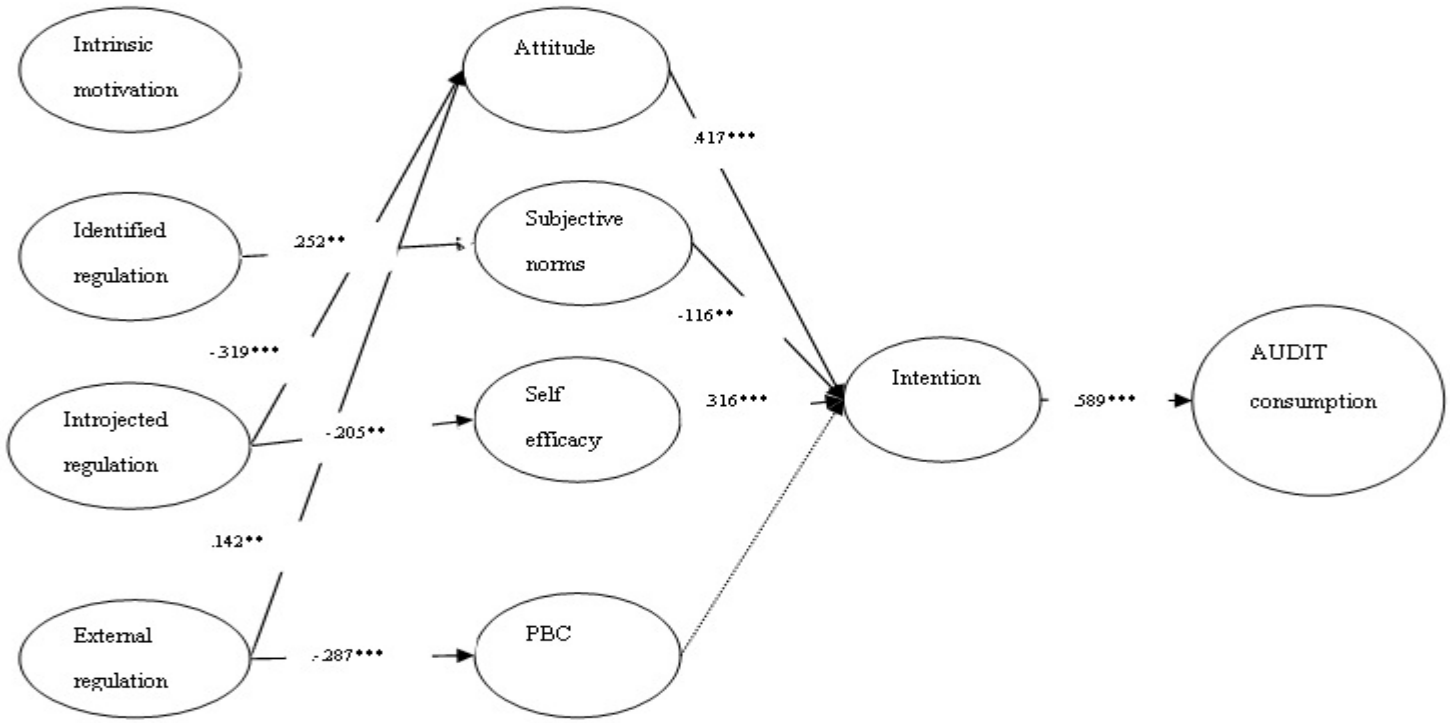

Figure 6.8. Path analytic model of predicting AUDIT consumption

(***p < .001, ** p<.05)

6.6.6 Model 2a path analytic model of predicting AUDIT consumption.

The model indicated close fit to the data ($\chi 2 = 6.215$, df = 6, p= .40; TLI = .998, CFI = 1.000, RMSEA = .014, PCLOSE=.661). The model predicted 59.9% of the variance in intention to behave and 48.8% of the variance in AUDIT consumption. Intention (β =.307, p<.001) and past behaviour (β =.252, p<.001) were strong predictors of AUDIT consumption. Willingness (β =.211, p<.001) was a significant predictor of AUDIT consumption. Willingness beta (β = .248, p<.001) and attitude (β =.473 p<.001) were strong predictors of intention, subjective norm (β =-.123, p=.032) and past behaviour (β = .160, p=.002). It also significantly predicted intention.

Past behaviour (β =.255, p<.001) was a strong predictor of willingness. Willingness was also predicted by attitude (β =.228, p=.003) and identified regulation (β =-.158, p=.028). Prototype (β =.126, p=.058) just failed to significantly predict willingness. Identified regulation (β =.268, p<.001) was a strong predictor of subjective norm. Past behaviour (β =-.144, p=.040) significantly predicted subjective norm. Identified regulation (β =-.047, p= .538) just failed to predict PBC. Past behaviour (β =.192, p=.003) was a significant predictor of attitude. Identified regulation (β =-.377, p<.001) was a strong predictor of attitude. Past behaviour (β =. -304, p<.001) was a strong predictor of identified regulation (see Model 2a in Figure 6.9, variance explained and path coefficients for path models in Appendix B Table B9 and B10).

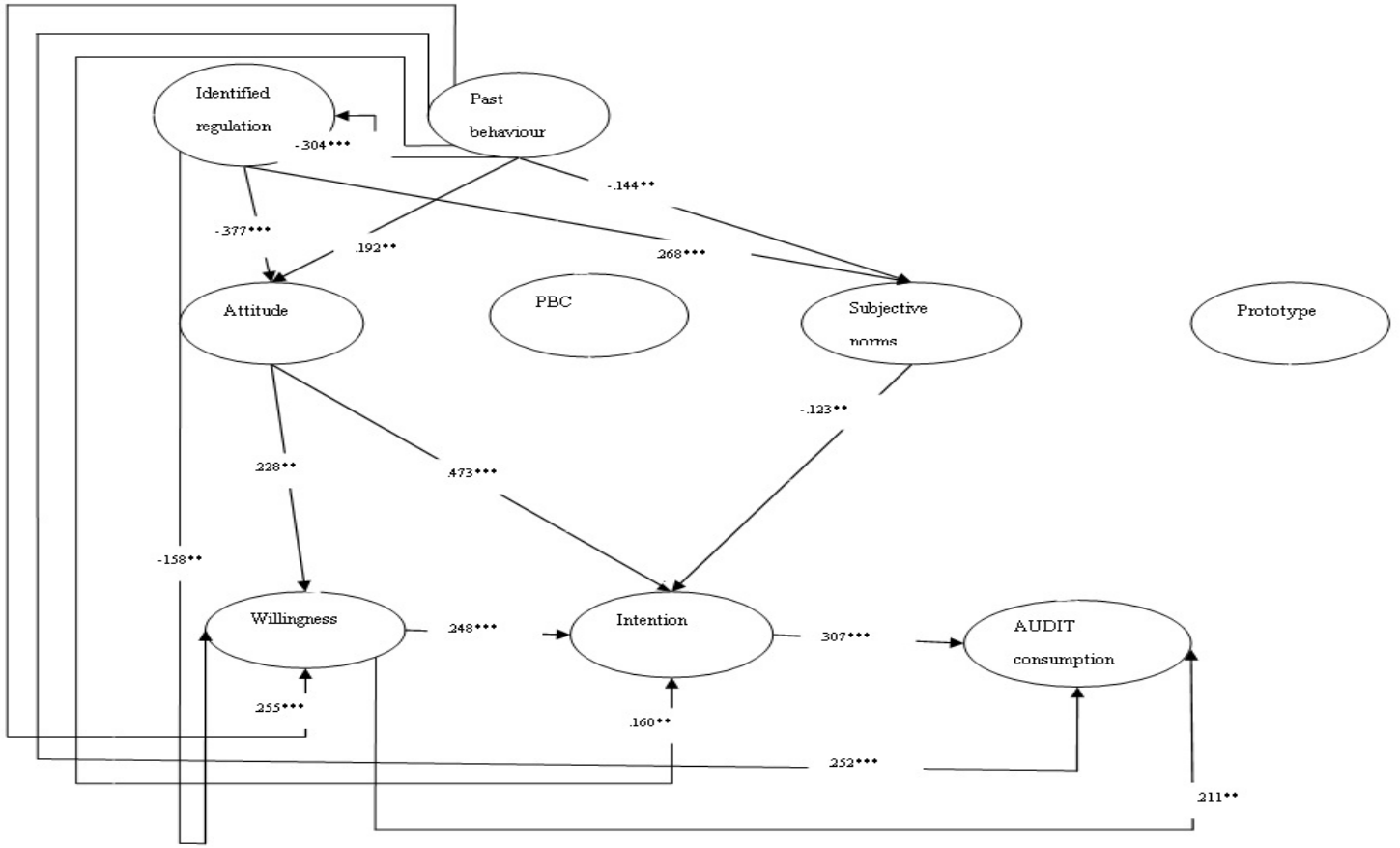

Figure 6.9. Path analytic model of predicting AUDIT consumption

(***p < .001, ** p<.05)

6.6.7 Model 3a predicting AUDIT problems. The model indicated close fit to the data ($\chi 2$ = 11.00, df = 4, p= .027; TLI = .838, CFI = .982, RMSEA = .074, PCLOSE=.183). The model predicted 28% of the variance in AUDIT consumption and AUDIT consumption predicted 37% variance in AUDIT problems. AUDIT consumption (β = .391, p<.001) was a strong predictor of AUDIT problems. Impulsivity (β beta=.118, p=.036), drinking to cope (β =.159, p=.027) and neuroticism (β=124, p=.033) significantly predicted AUDIT problems.

Drinking to cope (β =.417, p<.001) and gender (β = -.200, p<.001) were strong predictors of AUDIT consumption. Expectancy (β =-.121, p=.065) just failed to predict AUDIT consumption. Expectancy (β =-1.738, p<.001) was a strong significant contributor of drinking to cope. Neuroticism (β =-.168, p<.001) was a strong predictor of expectancy. Impulsivity (β =-159, p=.002) significantly predicted expectancy (see Model 3a in Figure 6.10, variance explained and path coefficients for path models in Appendix B Table B11 and B12).

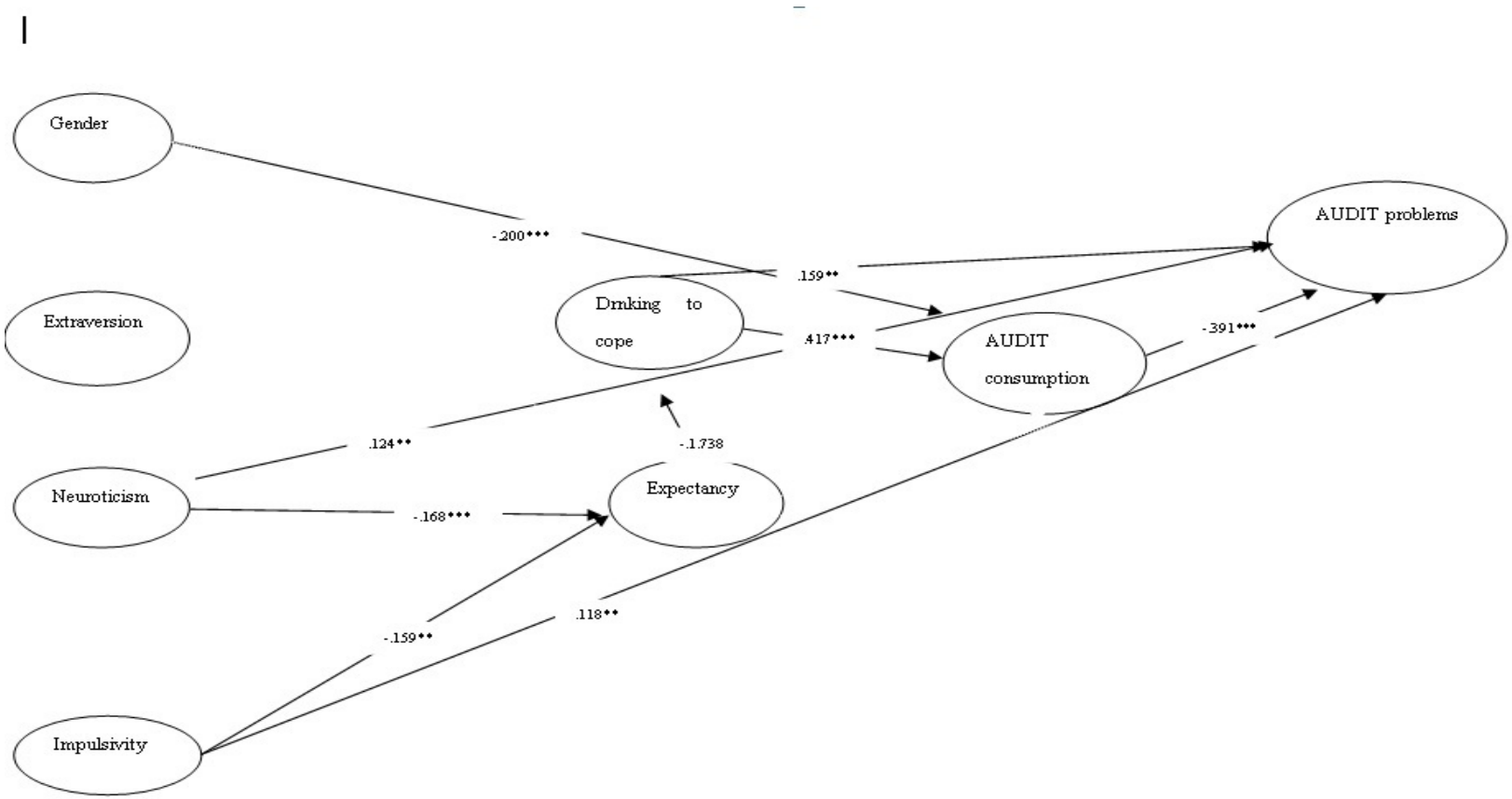

Figure 6.10. Path analytic model of predicting AUDIT problems

(***p < .001, ** p<.05)

6.6.8 Model 4a path analytic model of prediction of AUDIT consumption.

The model indicated close fit to the data ($\chi 2 = 30.81$, df = 18, p= .030; TLI = .971, CFI = .986, RMSEA = .062, PCLOSE =.275). The model predicted 61% of the variance in intention to behave but only 51% of the variance in AUDIT consumption. Intention was a strong predictor of AUDIT consumption (β = .306, p<.001). Attitude was a strong predictor of intention (β = .474, p<.001). Subjective norm (β = -.122, p<.05), willingness two (β = .247, p<.05) and past behaviour (β = .157, p<.05) were significant predictors of intention. In relation to AUDIT consumption intention (β = .306, p<.001) and past behaviour (β = .248, p<.001) were the strong predictors. Willingness two was a significant predictor of AUDIT consumption (β = .211, p<.05).

Past behaviour was a strong predictor of identified regulation (β = -.304, p<.001) and intrinsic motivation (β = -.263, p<.001). Past behaviour was a significant predictor of amotivation (β = .169, p<.05), introjected regulation (β = -.216, p<.05), attitude (β = .163, p<.05) and subjective norm (β = -.140, p<.05). Past behaviour was a strong predictor of willingness (β = .252, p<.001). Past behaviour was a significant predictor of intention (β = .157, p<.05). Past behaviour was a strong predictor of AUDIT consumption (β = .248, p<.001).

Intrinsic motivation was a significant predictor of PWM (β =- .191, p<.05), Amotivation was a significant predictor of attitude (β = .135, p<.05) and PWM (β = .214, p<.05). Introjected regulation was a strong predictor of attitude (β = -.360, p<.001). Identified regulation was a significant predictor of willingness (β =- .155, p<.05). Amotivation was a strong predictor of PBC (β = -.315, p<.001).

Attitude was a significant predictor of willingness two ($\beta = .229$, $p<.05$). Attitude was a strong predictor of intention ($\beta = .474$, $p<.001$). Subjective norm was a significant predictor of intention ($\beta = -.122$, $p<.05$). Willingness two was a strong predictor of intention ($\beta = .247$, $p<.001$). Intention was a strong predictor of AUDIT consumption ($\beta = .306$, $p<.001$). Willingness was a significant predictor of AUDIT consumption ($\beta = .211$, $p<.05$) (see Model 4a in Figure 6.11, variance explained and path coefficients for path models in Appendix B Table B13 and B14)

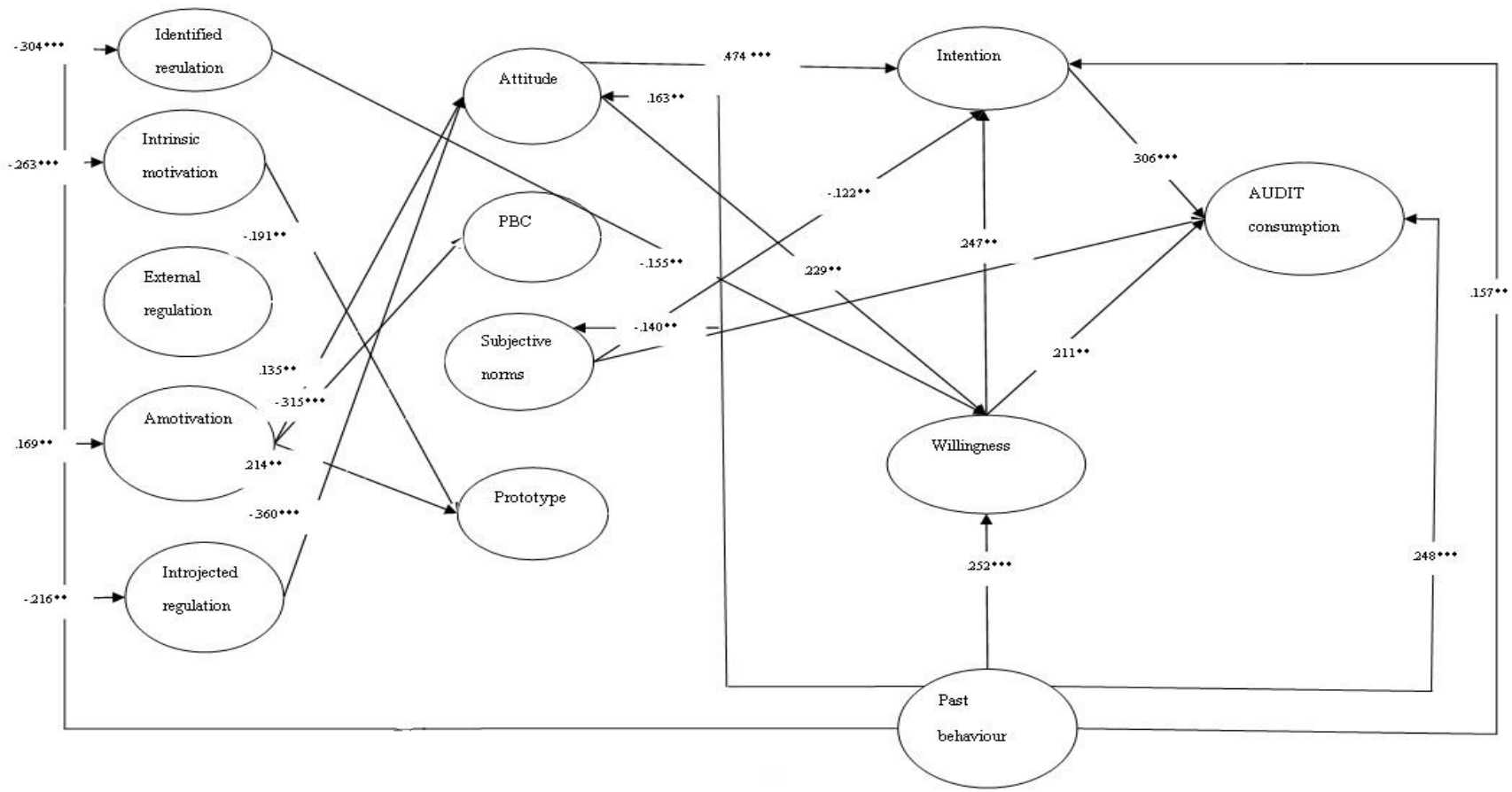

Figure 6.11. Path analytic model of predicting AUDIT consumption

(***p < .001, ** p<.05)

6.6.9 Model 4b path analytic model of predicting AUDIT problems. The model indicated a close fit to the data ($\chi 2 = 43.82$, df = 18, p= .001; TLI = .855, CFI = .971, RMSEA = .088, PCLOSE =.32). The model predicted 61% of the variance in intention to behave but only 37% of the variance in AUDIT problems. Interestingly intention was not a significant predictor of AUDIT problems (β=.156, p=.097). Attitude (β = .474, p <.001) and willingness two (β = .247, p <.001) were strong predictors of intention. Subjective norm (β = -.122, p <.05) and past behaviour (β = .157, p <.05) were significant predictors of intention. In relation to prediction of AUDIT problems PBC was a strong predictor of AUDIT problems (β = -.325, p <.001), willingness (β = .191, p <.05) and past behaviour (β = .217, p <.05) were significant predictors of AUDIT problems.

Past behaviour was a strong predictor of identified regulation (beta β = -.304, p <.001) and intrinsic motivation (β = -.263, p <.001). Past behaviour was a significant predictor of amotivation (β = .169, p <.05) and introjected regulation (β = -.216, p <.05). Past behaviour was also significant predictor of attitude (β = -.117, p <.05). Past behaviour was a significant predictor of subjective norm (β = -.140, p <.05). Past behaviour was a strong predictor of willingness (β = .252, p <.001). Past behaviour was a significant predictor of intention (β = .157, p <.05) and AUDIT problems (β = .217, p <.05).

Regards STD components, intrinsic motivation was a significant predictor of PWM β = -.191, p <.05). Amotivation was a significant predictor of attitude (beta β = .135, p <.05) and PWM β = .214, p <.05). Introjected regulation was a strong predictor of attitude (β =-.360, p <.001). Identified regulation was a significant predictor of willingness (β = -.155, p <.05). Amotivation was a strong predictor of PBC (β = -.315, p <.001).

Attitude was a significant predictor of willingness (β = .229, p <.05). Attitude was a strong predictor of intention (β = .474, p <.001). Subjective norm was a significant predictor of intention (β = -.122, p <.05). Willingness was a strong predictor of intention (β = .247, p <.001). PBC was a strong predictor of AUDIT problems (β = -.325, p <.001). Willingness was a significant predictor of AUDIT problems (β = .191, p <.05) (see Model 4b in Figure 6.12, variance explained and path coefficients for path models in Appendix B Table B15 and B16).

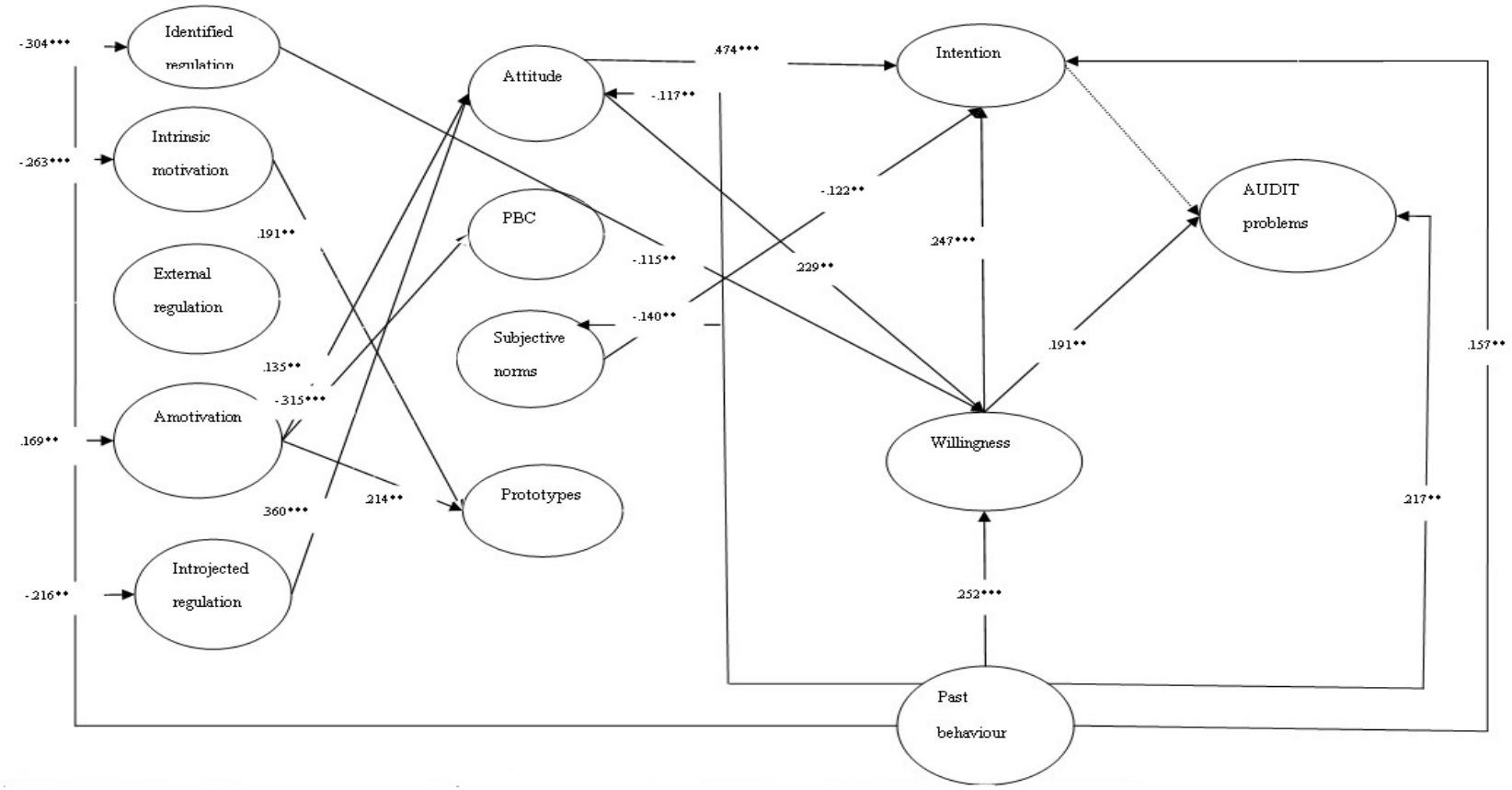

Figure 6.12. Path analytic model of predicting AUDIT problems

(***p < .001, ** p<.05)

6.6.10 Model 4c Path analytic model of predicting AUDIT total. The model indicated close fit to the data ($\chi 2 = 39.79$, df = 18, p= .002; TLI = .882, CFI = .997, RMSEA = .080, PCLOSE =.067). The model predicted 61% of the variance in intention to behave but only 50% of the variance in AUDIT total. Intention was a significant predictor of AUDIT total ($\beta = .238$, $p < .05$). Also from the table, it can be seen that willingness two ($\beta = .247$, $p < .001$) and attitude ($\beta = .474$, $p < .001$) were strong predictors of intention. Subjective norm ($\beta = -.122$, $p < .05$) and past behaviour ($\beta = .157$, $p < .05$) were also significant predictors of intention.

Past behaviour was a strong predictor of identified regulation ($\beta = -.304$, $p < .001$), intrinsic motivation ($\beta = -.263$, $p < .001$), willingness two ($\beta = .252$, $p < .001$) and AUDIT total ($\beta = .268$, $p < .001$). Past behaviour was a significant predictor of amotivation ($\beta = .169$, $p < .05$), introjected regulation ($\beta = -.216$, $p < .05$), attitude ($\beta = -.117$, $p < .05$) and subjective norm ($\beta = -.140$, $p < .05$) and intention ($\beta = .157$, $p < .05$).

In relation to SDT components, intrinsic motivation was a significant predictor of PWM (beta $\beta = -.191$, $p < .05$), amotivation was a significant predictor of attitude ($\beta = .135$, $p < .05$) and PWM ($\beta = .214$, $p < .05$), introjected regulation was a strong predictor of attitude ($\beta = -.360$, $p < .001$). Identified regulation was a significant predictor of willingness two ($\beta = -.155$, $p < .05$). Amotivation was a strong predictor of PBC ($\beta = -.315$, $p < .001$). Identified regulation was a significant predictor of AUDIT ($\beta = -.122$, $p < .05$).

Attitude was a significant predictor of willingness (β = .229, p <.05), attitude was a strong predictor of intention (β = .474, p<.001). Subjective norm was a significant predictor of intention (β = -.122, p <.05), willingness was a strong predictor of intention (β = .247, p<.001). Intention was a significant predictor of AUDIT total (β = .238, p <.05). PBC was strong predictor of AUDIT (β = -.211, p<.001), willingness was a strong predictor of AUDIT (beta β = .216, p<.001) (see Model 4c in Figure 6.13, variance explained and path coefficients for path models in Appendix B Table B17 and B18).

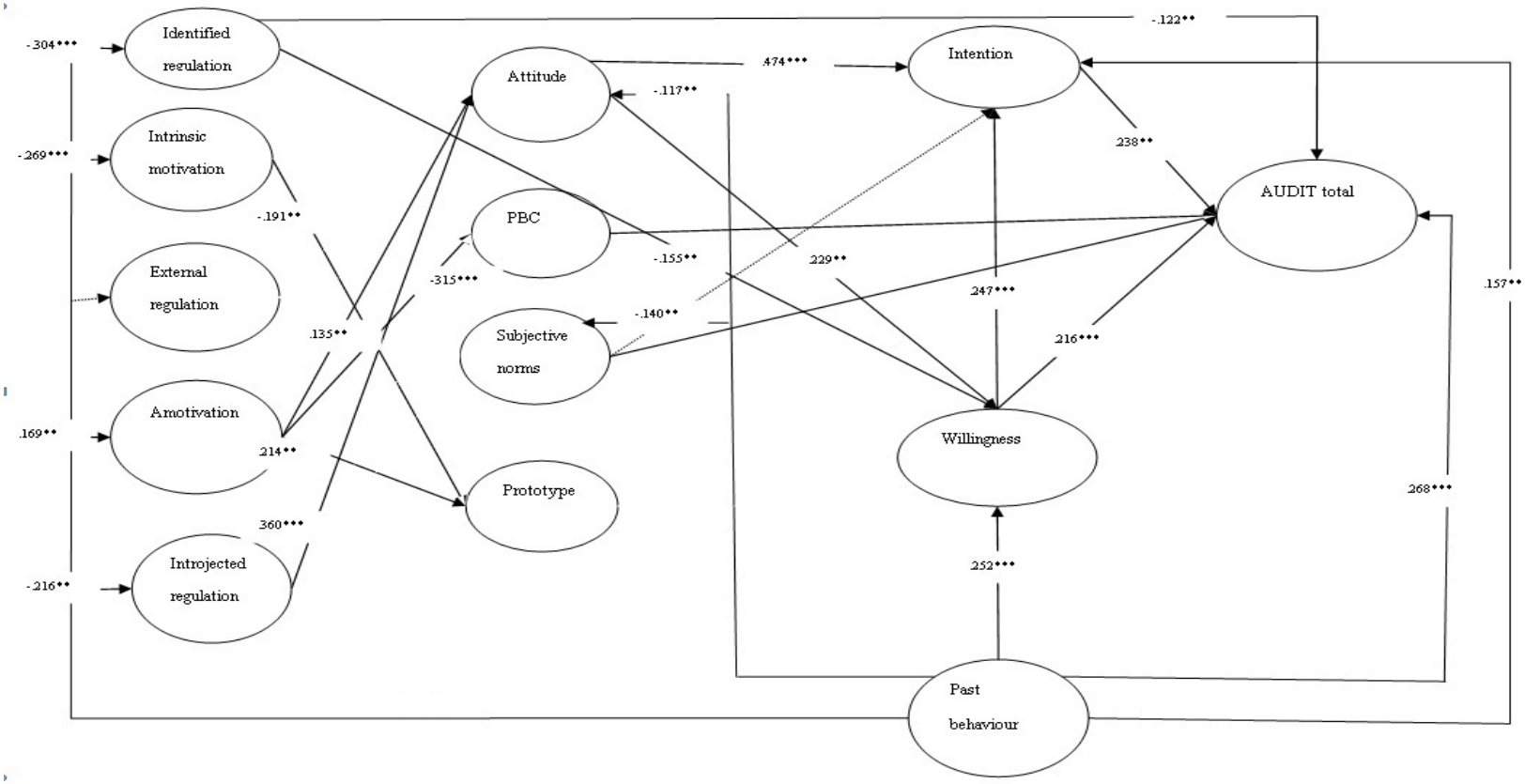

Figure 6.13. Path analytic model of predicting AUDIT total

(***p < .001, ** p<.05)

6.6.11 Model 4d path analytic model of predicting binge amount. The model indicated close fit to the data ($\chi 2 = 32.24$, df = 18, p= .021; TLI = .921, CFI = .984, RMSEA = .065, PCLOSE = .226). The model predicted 61% of the variance in intention to behave but only 45% of the variance in frequency of drinking. Intention was a significant predictor of binge amount (β = .240, p<.05). Also from the table, it can be seen that attitude (β = .474, p <.001) and willingness (β = .247, p<.001) were strong predictors of intention. Subjective norm (β = -.122, p<.05) and past behaviour (β = .157, p<.05) were significant predictors of intention. In relation to binge amount past behaviour (β = .333, p<.001) was a strong predictor of binge amount. Identified regulation (β = -.182, p<.05), intention (β = -.240, p<.05) and willingness (β = .171, p<.05) two were significant predictors of binge amount.

Past behaviour was a strong predictor of identified regulation (β = -.304, p <.001) and intrinsic motivation (β = -.263, p <.001). Past behaviour was significant predictor of amotivation (β = .169, p<.05) and introjected regulation (β = -.216, p<.05). Past behaviour was a significant predictor of attitude (β = -.163, p<.05). Past behaviour was a significant predictor of subjective norm (β = -.140, p<.05). Past behaviour was a strong predictor of willingness (β = .252, p <.001).

Intrinsic motivation was a significant predictor PWM total (β = -.191, p<.05). Amotivation was a significant predictor of attitude (β = .135, p<.05). Introjected regulation was a strong predictor of attitude (β = .135, p <.001). Identified regulation was a significant predictor of willingness (β = -.155, p<.05). Amotivation was a strong predictor of PBC (β =-.315, p <.001).

Attitude was a significant predictor of willingness ($\beta = .229$, $p<.05$). Attitude was a strong predictor of intention ($\beta = .474$, $p <.001$) (see Model 4d in Figure 6.14, variance explained and path coefficients for path models in Appendix B Table B19 and B20).

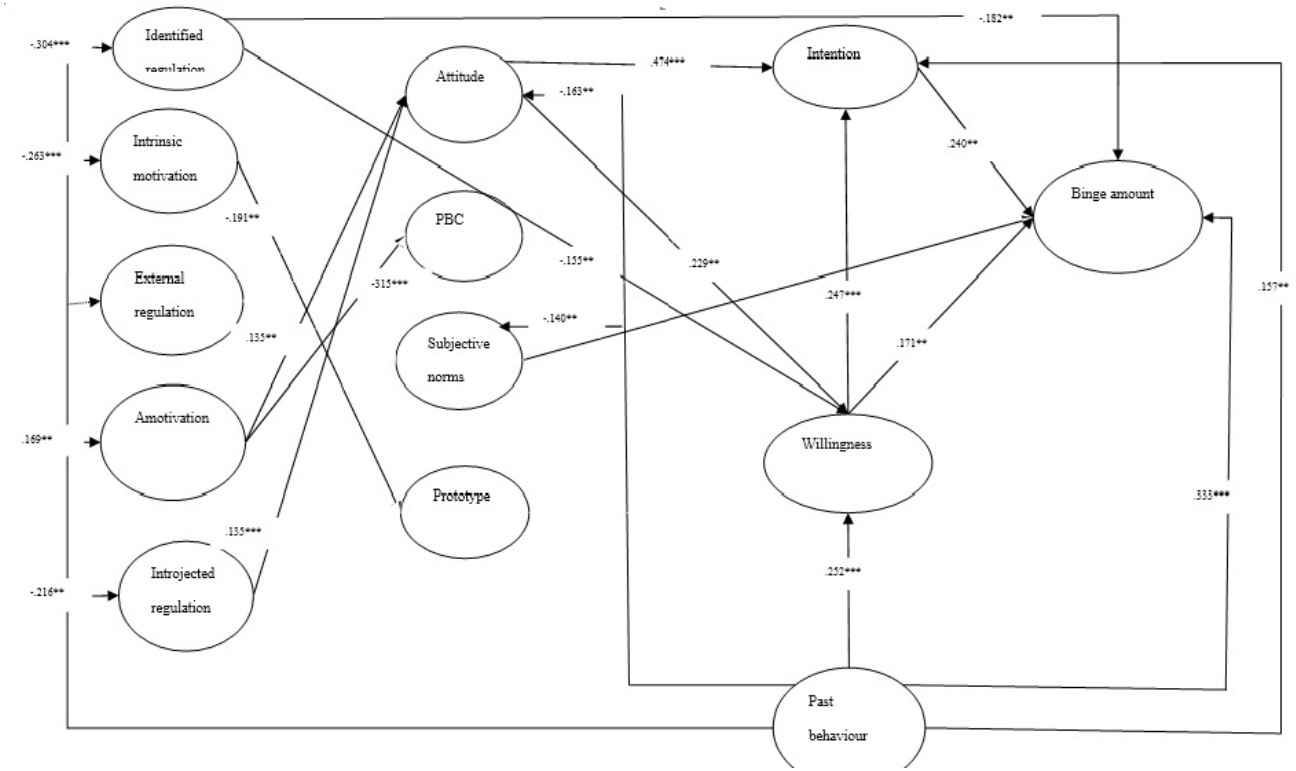

Figure 6.14. Path analytic model of predicting binge amount

(***p < .001, ** p<.05)

6.6.12 Model 4e Path analytic model of predicting frequency. The model indicated close fit to the data ($\chi 2 = 35.52$, df = 18, p= .008; TLI = .899, CFI = .980, RMSEA = .072, PCLOSE =. 139). The model predicted 61% of the variance in intention to behave but only 31% of the variance in frequency of drinking. Intention was a strong predictor of frequency (β = .367, p <.001). Also from the table, it can be seen that attitude (β = .474, p <.001) and willingness two (β = .247, p <.001) were strong predictors of intention. Subjective norm (β = -.122, p<.05) and past behaviour (β = .157, p<.05) were significant predictors of intention. In relation to predicting frequency past behaviour (β = .341, p <.001) and intention (β = .367, p <.001) were only strong predictors of frequency.

Past behaviour was a strong predictor of identified regulation (β = -.304, p <.001) and intrinsic motivation (β = -.263, p <.001). Past behaviour was a significant predictor of amotivation (β = .169, p<.05) and introjected regulation (β = -.216, p<.05). Past behaviour was a significant predictor of attitude (β = -.117, p<.05). Past behaviour was a significant predictor of subjective norm (β = -.252, p<.05). Past behaviour was a strong predictor of willingness (β = .252, p <.001).

Intrinsic motivation was a significant predictor of PWM total (β = -.191, p<.05). Amotivation was a significant predictor of attitude (β = .135, p<.05) and PWM total (β = .214, p<.05). Introjected regulation was a strong predictor of attitude (β = -.360, p <.001). Identified regulation was a significant predictor of willingness (β = -.155, p<.05). Amotivation was a strong predictor of PBC (β =-.315, p <.001).

Attitude was a significant predictor of willingness ($\beta = .229$, $p<.05$). Attitude was a strong predictor of intention ($\beta = .474$, $p <.001$) (see Model 4e in Figure 6.15, variance explained and path coefficients for path models in Appendix B Table B21 and B22).

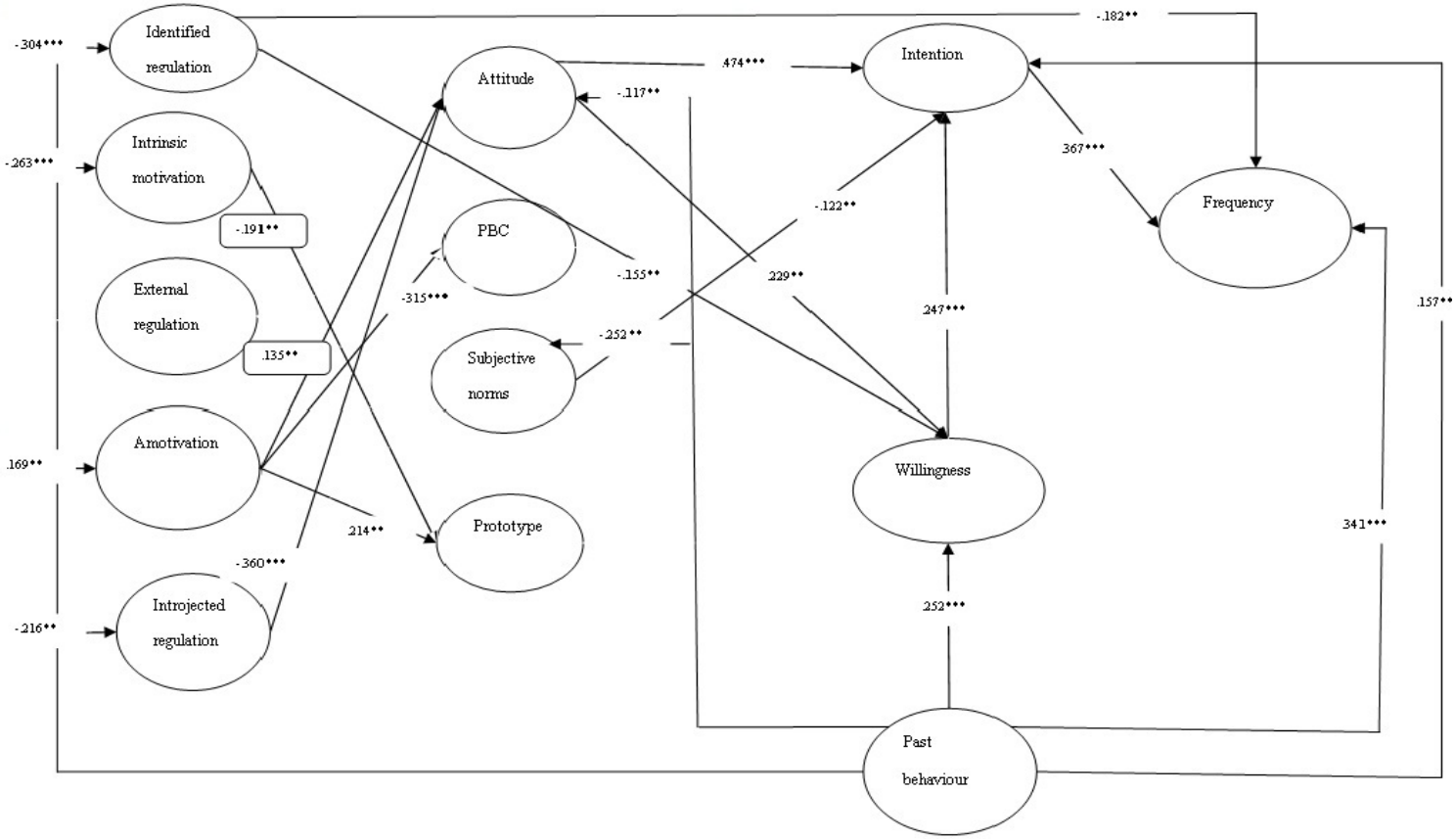

Figure 6.15. Path analytic model of predicting frequency

(***p < .001, ** p<.05)

6.6.13 Model 4f Path analytic model of predicting binging. The model indicated close fit to the data ($\chi 2$ = 32.23, df = 18, p= .021; TLI = .921, CFI = .984, RMSEA = .065, PCLOSE = .226). The model predicted .61% of the variance in intention to behave but only .45% of the variance in binge recorded. Intention was a significant predictor of binge recorded (β = .241, p <.05). Also from the table, it can be seen that attitude (β = .474, p <.001) and willingness two (β = .246, p<.001) were strong predictors of intention. Subjective norm (β = -.112, p <.05) and past behaviour (β =.157, p <.05) were also significant predictors of intention (β = -.112, p <.05). In relation to prediction of binging past behaviour (β = .333, p<.001) was a strong predictor of binging and identified regulation (β = -.182, p <.05), intention (β = .241, p <.05), willingness two (β =.171, p <.05) were significant predictors of binging.

In terms of SDT elements, intrinsic motivation was a significant predictor of PWM total (β = -.191, p<.05), amotivation was a significant predictor of attitude (β = .135, p<.05), amotivation was a significant predictor of PWM (β = .214, p<.05), introjected regulaton was a strong predictor of attitude (β = -.360 , p<.001), identified regulation was a significant predictor of willingness two (β = -.155, p<.05), amotivation was a strong predictor of PBC (β = -.315 , p<.001), identified regulation was a significant predictor of binge recorded (β = -.182, p<.05).

Past behaviour was a strong predictor of identified regulation (β = -.304, p<.001), intrinsic motivation (β = -.263, p<.001) and a significant predictor of amotivation (β = .169, p<.05) and introjected regulation (β = -.216, p<.05). In

relation to TPB components past behaviour was a significant predictor of attitude ($\beta = .163$, $p<.05$) and subjective norm ($\beta = -.140$, $p<.05$). In relation to PWM components, past behaviour was a strong contributor of willingness two ($\beta = .252$, $p<.001$). Attitude was a significant predictor of willingness ($\beta = .229$, $p<.05$) (see Model 4f in Figure 6.16, variance explained and path coefficients for path models in Appendix B Table B23 and B24).

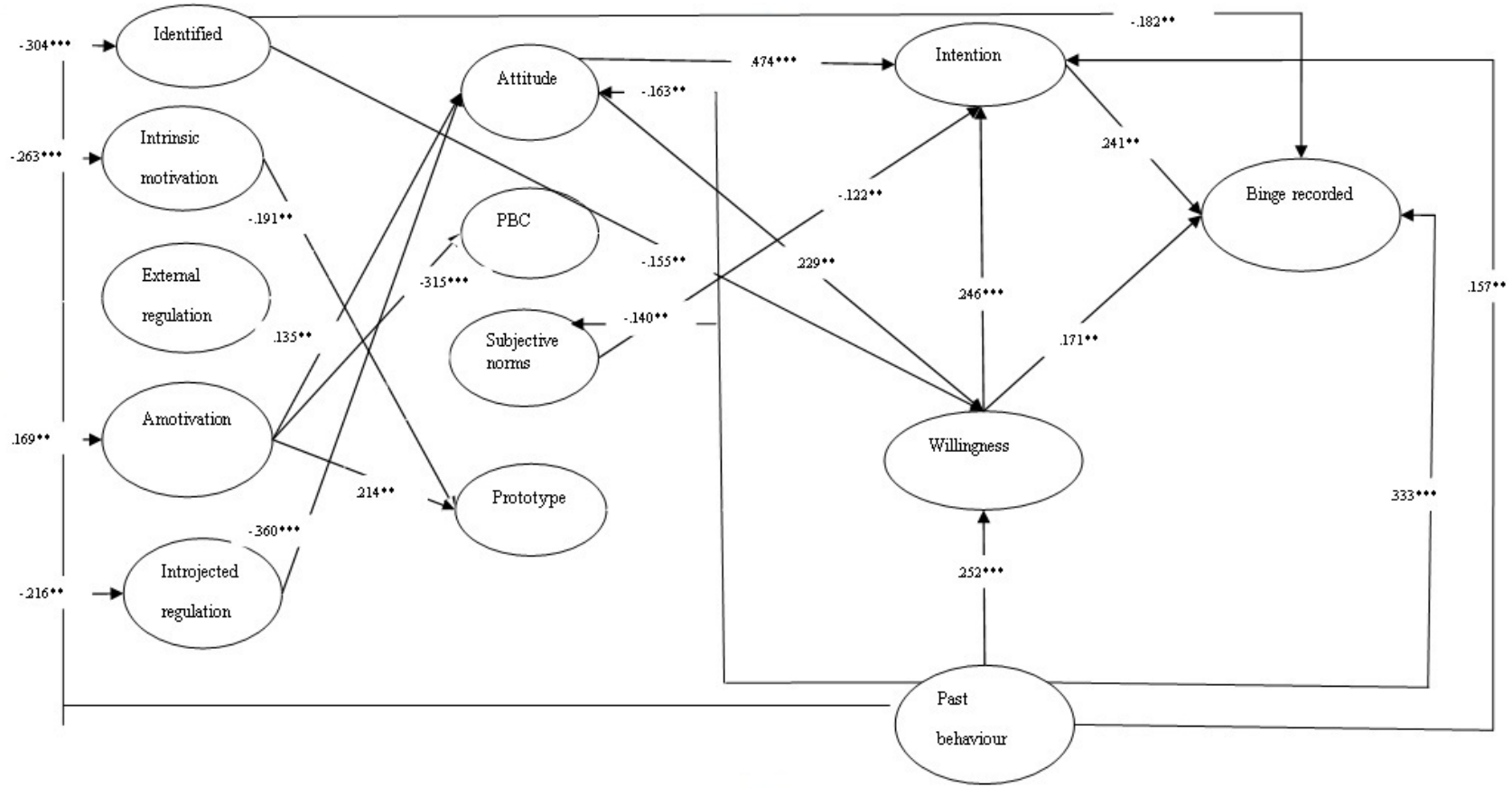

Figure 6.16. Path analytic model of predicting binge recorded

(***p < .001, ** p<.05)

6.7 Discussion

The aim of the present study was to test several models, which was an integration of theory of planned behaviour, self-determination theory, prototype willingness model, social learning theory components and several personality variables to increase the predictive properties of the models. For example, Ajzen (2011) suggests theory of planned behaviour could be improved by adding extra personality variables, which would increase its predictive properties.

When theory of planned behaviour was integrated with self-determination theory, as in previous research motivation, autonomous and controlled forms showed to be predicting cognitions: attitudes, subjective norm, perceived behavioural control and self-efficacy (Caudwell & Hagger, 2015; Hagger et al., 2012). Initial 5 models were hypothesised based on Hagger et al. (2012). In current research it both autonomous forms of motivation and controlled added to attitude, subjective norm, self-efficacy and PBC. Identified regulation predicted subjective norm, students who think that their drinking behaviour will be approved by significant others have internalised motivation to perform healthy behaviours. It is consistent with previous research as subjective norm always positively related to health behaviours (de Vries, Dijkstra, & Kuhlman, 1988) and identified regulation, which is autonomous motivation, was related to healthy behaviours, as it is a type of motivation which is internal and directed in achieving highly valued goal. Hagger et al. (2012) reported identified regulation to be the most significant variable in predicting keeping alcohol use within guideline limits.

In current research, identified regulation and alcohol behaviour was mediated by subjective norm and contributed to intention, whereas Hagger et al. (2012) reported it to be attitudes, PBC and intention. SDT constructs have been used to explain reflective evaluation

towards performing the behaviour and they have been mediating with social cognitive components (Hagger et al. 2012). In addition, in previous research it was argued that subjective norm would not be related to autonomous forms of motivation, as it would be about social factor in other words not internalised motivation but controlled, would have been more related to subjective norm (Caudwell & Hagger, 2015; Hagger et al, 2012). It seems that perceiving that important other approves or disapproves is related to more internalised form of motivation, and makes this belief internalised. Introjected regulation predicted attitude and self-efficacy, external regulation contributed to attitude and PBC. Caudwell and Hagger (2015) found that autonomous form of motivation did not contribute towards PBC, the authors concluded people's perception of control is not related to autonomous motives. Cooke and French (2011) found that predictive properties of PBC changes when the timeframe to perform the behaviour is included. PBC was significant predictor of intention to binge drinking next week but not today or tomorrow (Cooke & French, 2011), authors suggested to investigate further why PBC would not predict intention on an occasion. In present study external regulation (controlled motivation) contributed to PBC, perceived control negatively linked to motivation to stay within safe limits based on external influence. It can be interpreted that students who are keeping their alcohol consumption within safe limits to achieve a reward or avoid negative consequences have less control over the behaviour. Caudwell and Hagger (2015) suggested people seem to engage in pre-drinking for controlled reasons (to avoid guilt, conform, to gain reward or to avoid negative consequences) to which determines lower perception of control over the behaviour than social approval.

Similar results were reported by Caudwell and Hagger (2015), controlled motivation was negatively related to PBC. None of the SDT components were directly linked to behaviour which means that motives do not have spontaneous effect on consumption

(Hagger, Chatzisarantis & Harris, 2006). Attitude and self-efficacy were related to the intention positively, and to subjective norm negatively. Positive attitude towards the behaviour and the ability to perform the behaviour were predictors of intention to drink. Students who thought the behaviour was not approved by significant other were less likely to perform the behaviour. Although, Cooke and French (2011) reported that predictive utilities of TPB changes depending whether the data was collected within the context (e.g., a bar) or not (e.g., library). The context effected to subjective norm-intention relationship but not attitude-intention, PBC- intention relationship (Cooke & French, 2011). Similar predictive properties of two models were observed while predicting frequency, units consumed in a single occasion and AUDIT consumption. Models predicted 17%, 21%, 29%, 16% and 35% variance in outcome variables (Figures 6.4-6.8). Intention was predicted by attitude, subjective norm and self-efficacy but not PBC. Five models predicted 52%, 51%, 50%, 51% and 50% variance in intention.

In regards to mediation effect, autonomous motivation (identified regulation) and intention was mediated by subjective norm confirming Caudwell and Hagger's (2015) results, in addition they found attitude was a second mediator. The mediation effect of identified regulation is in line with Amiot, Sansfacon, and Louis (2013) who identified belief about social influences to be more internalised, which is true to our sample. It is not controlled by social influences and cannot be interpreted as controlled influence.

In relation to the theory of planned behaviour components statistically significant effect was found of attitude, subjective norm and self-efficacy on intention. As it was mentioned before variance of 17%, 21%, 29%, 16% and 35% was predicted of various alcohol related behaviours (see Figure 6.4-6.8). Very small percentage predicted shows models to be inadequate in evaluating the behaviour (Caudwell & Hagger, 2015).

The following model (see Figure 6.9) was hypothesised based on Hagger et al. (2012) and Todd et al. (2014) in which identified regulation from SDT, attitude, PBC and subjective norm and intention from theory of planned behaviour, prototype and willingness from PWM and past behaviour was included to predict AUDIT consumption. Identified regulation is negatively related to willingness and attitude, and is different to previous 5 models. In previous 5 models identified regulation did not contribute to attitude at all, though the result is in line with Caudwell and Hagger (2015) and Hagger et al., 2012. Identified regulation was positively related to subjective norm (Caudwell & Hagger, 2015; Hagger et al., 2012). The more person is motivated to stay within safe limits because of highly valued goal, the more he is internally motivated to keep within safe limits, the less willing to drink. Additionally, he has less positive attitude towards drinking. The result is in line with Amiot et al. (2013) and Caudwell and Hagger (2015) who reported relation of autonomous motivation on subjective norm. Past behaviour was positively related to attitude, willingness, intention and AUDIT consumption and negatively to identified regulation and subjective norm. The more people drank in the last 6 month. The more people drank the last 6 months the more positive attitude, willingness, intention they had towards drinking. In addition, past behaviour positively predicted present alcohol use. Students who consume seem to have less autonomous motivation (identified regulation) to stay within safe limits. Positive attitude predicted more willingness to drink. In addition, willingness was also predicted by past behaviour and identified regulation, all together 64% variance in willingness have been predicted. In previous research when PWM and TPB components were investigated, Rivis et al. (2011) found 47% of variance in willingness and 65% of variance in drinking and driving behaviour. Different to present research willingness was predicted with subjective norm, PBC, prototype evaluation and the interaction between prototype evaluation and prototype similarity (Rivis et al., 2011). PBC was not significant predictor in this model. Subjective norm was negatively

related to intention. Intention and willingness added to the variance predicted towards AUDIT consumption. Meta analytic review by Todd et al. (2014) reported that willingness improved the predictability of behaviour for 4.9% over and above intention and the results confirm willingness to be a construct to contribute further to TRA/TPB constructs.

Hagger et al. (2012) mentioned when past behaviour is included in the model, it wiped out the relation between psychological variables and behaviour it would invalidate the model and would confirm behaviour being predicted by previous behaviour. The model (Figure 6.6) confirmed that there is still relation between cognitive constructs intention and behaviour, though past behaviour is contributing to most of the variables in the model.

Last model (see Figure 6.10) was hypothesised based Simons et al. (2005). In Simons et al.'s (2005) study included gender, extraversion, neuroticism, impulsivity, drinking to cope, expectancy, AUDIT consumption and AUDIT problems. Gender was negatively related to AUDIT consumption and extraversion did not contribute towards any variable. Neuroticism positively related to AUDIT problems and negatively to expectancy. Impulsivity was also positively related to expectancy and AUDIT problems. Expectancy positively contributed to drinking to cope. Drinking to cope positively predicted AUDIT consumption and AUDIT problems.

As autonomous motivation came out significant in the regression analysis during the pilot study it was decided to include it in line with other SDT constructs (see Figure 6.11-6.16). the following 6 models included SDT, TPB, PWM and past behaviour to predict various alcohol behaviours. Interestingly the same patterns have been observed among the following outcome variables: AUDIT consumption, AUDIT problems. Identified regulation did not predict any of TPB components but willingness. Intrinsic motivation predicted to prototype. Amotivation was significant predictor of attitude, PBC and prototype. Introjected regulation was negatively linked to attitudes. From TPB constructs attitude was significant

predictor of willingness, subjective norm was negatively predicted intentions. PBC again did not show any significant relation with either intention or outcome variable. Willingness contributed to intention and outcome variable (AUDIT consumption and AUDIT problems). It shows that spontaniouty of willingness. Past behaviour was adding to the identified regulation, intrinsic motivation, amotivation, introjected regulation, attitude, subjective norm, willingness intention and outcome variable (AUDIT consumption and AUDIT problems). Past behaviour was creating noise in previous studies too (Hagger et al., 2012)

The following 4 models were constructed to check for AUDIT total, binge amount, frequency, binge recorded (see Figures 6.13, 6.14, 6.15, 6.16). In addition to the relationship reported between the constructs in the previous 2 models (see Figure 6.11 and 6.12), in the following 4 models (see Figure 6.13, 6.14, 6.15, 6.16) identified regulation had a direct effect on outcome variables'. Previous research highlighted the importance of identified regulation in drinking context (Cooke & French, 2011) but so far none of the literature reported identified regulation to be directly linked to outcome variables. Table 6.20 describes time 1 models.

Table 6.20
Time 1 models

Models	χ^2	*df*	CFI	TLI	RMSEA	PCLOSE
Model 1a Path analytic model of predicting frequency of alcohol use.	16.92	12	.995	.976	.036	.703ns
Model 1b Path analytic model of units consumed in a single occasion.	29.48	12	.982	.916	.067	.159ns
Model 1c Path analytic model of predicting AUDIT total.	50.36	12	.962	.825	.099	.002sg
Model 1d Path analytic model of predicting past behaviour of binging.	15.06	12	.997	.985	.028	.792ns
Model 1e Path analytic model of AUDIT consumption.	30.64	12	.982	.916	.069	132ns
Model 2a Path analytic model of predicting AUDIT	6.215	6	1.000	.998	.014	.661ns

consumption.						
Model 3a Path analytic model of predicting AUDIT problems.	11.00	4	.982	.838	.074	.183ns
Model 4a Path analytic model of predicting of AUDIT consumption	30.81	18	.986	.971	.062	.275ns
Model 4b Path analytic model of predicting AUDIT problems	43.82	18	.971	.855	.088	.32ns
Model 4c Path analytic model of predicting AUDIT total	39.79	18	.997	.882	.080	.67ns
Model 4d Path analytic model of predicting binge amount.	32.24	18	.984	.921	.065	.226ns
Model 4e Path analytic model of predicting frequency.	35.52	18	.980	.899	.072	.139ns
Model 4f Path analytic model predicting binge recorded.	32.23	18	.984	.921	.065	.226ns

6.8 Chapter Summary

This chapter has presented the findings from the Phase I of mixed methods research, correlations between the variables in the study and the path analytic models were presented to address the hypotheses of the study. The path models presented in this chapter have predicted variance in intention 22% to 33% and the behaviour 22% to 55%. The findings from the Phase I of mixed methods study was successful in identifying significant contributors of alcohol consumption. In addition, the results assisted in identifying the components, which were significant in predicting alcohol consumption in the student population.

Chapter Seven: Phase II-Quantitative Analysis of Longitudinal Data

7.1 Introduction

This chapter is divided into several sections and reports the results of longitudinal data: time 1 (Phase I) and time 2 (Phase III). The questionnaires were completed in time 1 and follow up, time 2. This was organised in three-months' time. The chapter begins with descriptive statistics. The reliability and validity of the scales have been assessed Cronbach's alphas. In addition, correlations have been conducted to check for the relationship between a 3-month time period. Paired t-test was also run to analyse mean differences. At the end of the chapter some path analysis have been performed to check for the outcome variables in time 1 and 2 and the change predicted.

7.2 Descriptive Statistics

7.2.1 Participants. The participants who took part in time 1 (baseline) were invited to participate in three-month time in time 2 (follow-up), 115 students with age range 18-66 with mean age 27.9 SD 10.8, took part, from which 42% man and 57% female. The attrition was 65 % as 324 students took part in time one. The reason for the students to drop out was that data collected took place over two terms and the students who had unit change or started lessons within other departments were difficult to contact. Nevertheless, the students were informed about time 2 data collection through social media and with use of posters. Alcohol use of the participants in a previous week in time 1 is shown in Table 7.1 below.

7.2.2 Days of alcohol use in a previous week.

Table 7.1
Days of Alcohol Use in a Previous Week in Time 1

Days	Participants (%)
0	29.6
1	24.3
2	13.0
3	13.0
4	5.2
5	6.1
6	.9
7	1.7
Missing	6.1

Table 7.2
Days of Alcohol Use in a Previous Week in Time 2

Days	Participants (%)
0	28.7
1	21.7
2	14.8
3	7.8
4	4.3
5	2.6
6	1.7
7	1.7
Missing	16.5

7.2.3 Most number of units consumed.

Table 7.3
Most Number of Units Consumed Within Last Week in Time 1

Number of units	Participants (%)
0	29.6
1-6	43.6
7-49	19
Missing	7.8

Table 7.4
Most number of units consumed within last week in time 1

Number of units	Participants (%)
0	30.4
1-6	39.9
7-49	13.2
Missing	16.5

From the tables above it can be seen that over 2-time period 19% (time 1) and 13% (time 2) of participants were drinking over recommended limits (Prime Minister's Strategy Unit, 2003).

7.2.4 Binging in the last 6 month in time 1.

Table 7.5
Binging in the Last 6 Month in Time 1

Number of binging occasions	Participants (%)
0	31.3
1-10	41.8
11-20	5.3
21-30	7.9
40-96	5.3
Missing	7.8

7.2.5 Binging in the last 6 month in time 2.

Table 7.6
Binging in the Last 6 Month in Time 2

Number of binging occasions	Participants (%)
0	33.0
1-10	34.7
11-20	12.1
21-30	1.8
98	0.9
125	0.9
Missing	16.5

In relation to binge drinking over the last 6 months, the 33% of participants reported nil number of occasions of binge drinking. The number of times the participants who were involved in binge drinking was 1-10 times 34%, 11-20 times 12%, 21-30 times 2%, 98 times 1% and 125 times 1% were involved in binge drinking.

7.2.6 Frequency of having 6 or more drinks in one occasion (AUDIT item 3a).

Frequency of having 6 or more drinks in one occasion is shown in table 7.7 and 7.8 which shown has reduced over 3 months.

Table 7.7
Frequency of Having 6 or More Drinks in One Occasion Time 1

Frequency	Participants (%)
Never	30.4
Less than monthly	35.7
Monthly	15.7
Weekly	4.3
Daily or almost daily	0.9
Missing	13.0

Table 7.8
Frequency of Having 6 or More Drinks in One Occasion Time 2

Frequency	Participants (%)
Never	40.9
Less than monthly	30.4
Monthly	8.7
Weekly	5.2
Daily or almost daily	1.7
Missing	13.0

7.3 Constructs and Scales, Reliability and Validity

The reliabilities of the scales used have been calculated in time 2.

7.3.1 Theory of planned behaviour.

Table 7.9
Reliability of Theory of Planned Behaviour Constructs

Construct	Cronbach's Alpha (α =) at time 2
Attitude	.90
Subjective norm	.88
Self-efficacy	.85
Perceived control	.84
Intention	.97

7.3.2 Alcohol use (AUDIT).

Table 7.10
Reliability of AUDIT total, Consumption and Problems

Construct	Cronbach's Alpha (α =) at time 2
AUDIT total	.87
AUDIT consumption (Items 1-3)	.72
AUDIT problems (Items 4-10)	.88

7.3.3 Self-determination theory.

Table 7.11
Reliabilities of Self-determination Theory Components

Construct	Cronbach's Alpha (α =) at time 2
Intrinsic motivation	.92
Identified regulation	.92
Introjected regulation	.90
External regulation	.81
Amotivation	.86

7.3.4 Prototype willingness model.

Table 7.12
Reliability of PWM

Construct	Cronbach's Alpha (α =) at time 2
PWM	.79

7.4 Validity

Mean scores of the constructs were compared with the use of paired t-test to assess external validity of the measures used in time 1 and 2.

7.4.1 Theory of planned behaviour. The mean scores and standard deviations have been calculated for theory of planned behaviour components. They are presented in Table 7.3.

Table 7.13
Means Scores and Standard Deviations of the Constructs of the Theory of Planned Behaviour at Time 1 and 2

Construct	Mean T1	SD T1	Mean T2	SD T2
Attitude	15.190	7.278	14.547	7.643
Subjective norm	10.292	3.264	10.25	3.218
Self-efficacy	14.296	4.451	19.840	5.907

Perceived control	30.571	4.602	25.055	4.272
Intention	17.604	6.741	15.547	8.280

The average score for attitude showed there was a decrease in positive attitudes towards alcohol use between time 1 and time 2, though it was not significant (t (94) =.1.220, p=.225).

Subjective norm showed a minor decrease, it is less perceived approval of significant other towards alcohol use, the difference was not significant (t (95) =.159, p=.874).

Looking at means, there was an increase in self-efficacy between time 1 and time 2. The participants were more confident in involving in binge drinking. P value shows the difference is significant (t (80) =. -19.060, p<.001).

Perceived control showed that participants control over drinking has fallen down over 3-month time and the difference showed to be significant (t (90) =.23.360, p<.001).

Intention in engaging in a binge drinking session over next 2 weeks has reduced, and the difference was significant (t (52) =2.469, p=.017).

7.4.2 Alcohol use (AUDIT).

Table 7.14
Means Scores and Standard Deviations of AUDIT total, AUDIT consumption and AUDIT problems

Construct	Mean T1	SD T1	Mean T2	SD T2
AUDIT total	16.776	5.764	16.806	5.930
AUDIT consumption (Items 1-3)	7.163	2.595	6.969	2.606
AUDIT problems (Items 4-10)	9.612	3.839	9.837	4.076

There was not much difference between AUDIT time 1 and AUDIT time 2 means. The difference was not significant (t (97) =-.102, p=.919).

AUDIT consumption has shown to be decreased slightly and the difference between time 1 and 2 was not significant (t (97) =1.243, p=.217).

AUDIT problems showed to decrease but the difference between 3-month period (time 1 and 2) was not significant (t (97) =-.866, p=.389).

7.4.3 Self-determination theory.

Table 7.15
Means Scores and Standard Deviations of the Constructs of the Self-determination Theory

Construct	Mean T1	SD T1	Mean T2	SD T2
Intrinsic motivation	11.734	3.593	11.819	3.504
Identified regulation	12.553	3.426	12.660	3.336
Introjected regulation	10.085	3.500	10.734	3.794
External regulation	8.000	3.124	8.484	3.338
Amotivation	5.138	2.208	5.085	2.439

In relation to self-determination theory components Intrinsic motivation showed to have increased slightly between time 1 and 2, thought the difference was not significant (t (93) =-.363, p=.718).

Identified regulation showed to be increased, the difference between time 1 and time 2 was not significant (t (93) =-.414, p=.680).

Another component of self-determination theory introjected regulation has increased more than any other components, the results of paired t test showed insignificant difference in two times (time 1 and time 2) (t (93) =-1.935, p=.056).

External regulation has increased and the results of paired t-test showed insignificant difference (t (92) =-1.402, p=.164).

Amotivation has decreased slightly and the difference was not significant (t (93) =.239, p=.812).

7.4.4 Prototype willingness model.

Table 7.16
Means Scores and Standard Deviations of the Constructs of the Prototype Willingness Model

Construct	Mean T1	SD T1	Mean T2	SD T2
PWM	46.95	12.07	2.01	10.28

7.4.5 Frequency and binging.

Table 7.17
Means Scores and Standard Deviations for Frequency and Binging Occasions

Construct	Mean T1	SD T1	Mean T2	SD T2
Frequency	1.76	1.756	1.58	1.718
Binging	5.67	8.972	4.49	8.131

Frequency of alcohol use over previous week showed to have decreased, the difference was not significant (t (91) =.1.140, p=.257).

The number of binging occasions within last 6 months has decreased, the difference was not significant (t (88) =1.726, p=.088).

7.5 The Relationship Between Outcome Variables and the Constructs of Theories in Time 1 and 2

7.5.1 Relationships between time 1 outcome variables and time 1 TPB and SDT constructs. The relationship between outcome variables frequency, units consumed in a single occasion and binging in time 1, with constructs of TPB and SDT in time 1 have been analysed using Pearson correlation.

The results indicated that frequency was significantly positively related to attitude and significantly negatively to self-efficacy and identified regulation.

In regards to units consumed in a single occasion self-efficacy and intention were significantly positively related and all the constructs of SDT, intrinsic motivation, identified regulation, introjected regulation and external regulation were significantly negatively related.

The results of the correlation analysis on binging confirmed its significant positive relation to attitude, self-efficacy and intention. Subjective norm, intrinsic motivation, identified regulation, introjected regulation, and external regulation were significantly negatively related to binging (see Table 7.8).

Table 7.18
Relationship Between Outcome Variables (frequency, units, binging) and Constructs of TPB and STD in Time 1

	Frequency b	N of units consumed b	Binging b
attitudetotal total attitude	.229*	.217*	.409**
subjnormtotal total subjective norm	-.027	-.217*	-.337**
percievdcontroltotal	-.163	.039	.025
selfefctotal2 total self eficacy 2	.072	.292*	.376**
Intentiontotal total intention	.098	.340*	.440**
intrinsic_motivation	-.156	-.347**	-.410**
identified_regulation	-.221*	-.428**	-.442**
introjected_regulation	-.124	-.283**	-.334**
external_regulation	-.174	-.205	-.197
amotivation	.050	.078	.141

Note. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

7.5.2 Relationships between time 2 AUDIT scores and time 1 TPB and SDT constructs.

AUDIT total in time 2 was significantly positively predicted by attitude self-efficacy intention and amotivation in time 1. Significant negative predictors of AUDIT total

in time 2 were subjective norm, perceived behavioural control, intrinsic motivation, identified regulation, introjected regulation, and external regulation in time 1.

AUDIT problems in time 2 showed significant positive relation with attitude, self-efficacy and amotivation. Significant negative relation of AUDIT problems in time 2 was observed with time 1 subjective norm, perceived behavioural control, intrinsic motivation, identified regulation, introjected regulation.

AUDIT consumption in time 2 showed significant positive relationship with time 1 attitude, self-efficacy, intention, and significant negative relation with subjective norm, intrinsic motivation, identified regulation, introjected regulation, and external regulation in time 1 (see Table 7.19).

Table 7.19
Relationship between outcome variables in time 2 and constructs of TPB and STD in time 1

	AUDIT_total_b	AUDIT_problems_b	AUDIT_consumption_b
attitudetotal total attitude	.452**	.288**	.579**
subjnormtotal total subjective norm	-.423**	-.376**	-.374**
percievdcontroltotal	-.277**	-.352**	-.085
selfefctotal2 total self eficacy 2	.379**	.271*	.428**
Intentiontotal total intention	.402**	.256	.521**
intrinsic_motivation	-.491**	-.343**	-.577**
identified_regulation	-.547**	-.413**	-.596**
introjected_regulation	-.261*	-.096	-.444**
external_regulation	-.094	.032	-.265*
amotivation	.268**	.291**	.152

Note. ** Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed).

7.6 Path Analysis

Path analytical models were hypothesised based on Hagger et al. (2012) (See figure 6.1) and Todd et al. (2016) (see Figure 6.2) to predict change over 3-month time in AUDIT

total, AUDIT problems, AUDIT consumption, frequency, binging, binging occasions (models 1a, 1b, 1c, 1d, 1e, 1f) (based on AUDIT item 3) (see Figures 7.1, 7.2, 7.3, 7.4, 7.5, 7.6). Path analytic model of prediction of change in binging was conducted without past behaviour as past behaviour was creating too much noise by predicting most of the constructs (model 2a) (see Figure 7.7).

7.6.1 Model 1a path analytic model prediction of AUDIT total. In order to check for the prediction of the change over time 1 and 2, time one variables of time 1 were entered into the SEM model, the first model checked for the outcome variable AUDIT total (in time 1) and AUDIT total (in time 2).

The model indicated excellent fit to the data ($\chi 2 = 18.708$, df = 18, p= .410; TLI = .994, CFI = .999, RMSEA = .019, PCLOSE=.699). The model predicted 65% of the variance in intention to behave, 59% of the variance in AUDIT total and 83% variance AUDIT totalb.

The following variables contributed to the change over 3-month period. PBC was a strong predictor of AUDIT totalb (β =- .189, p <.001). Identified regulation (β = -.193, p <.05) and introjected regulation (β = .170, p <.05) were significant predictors of AUDIT totalb.

Willingness was a significant predictor of AUDIT total (β = .190, p <.05). Past behaviour was a strong predictor of AUDIT total (β = .483, p <.001).

Attitude (β = .459, p <.001) and subjective norm (β = -.293, p <.001) was a strong predictor of intention. Willingness was a significant predictor of intention (β = .243, p <.05). Interestingly, intention itself did not significantly predict either AUDIT total or AUDIT total2b.

Past behaviour was strong significant predictor of intrinsic motivation (β = -.410, p <.001), identified regulation (β = -.463, p <.001) and introjected regulation (β = -.338, p

<.001). Past behaviour was also a significant predictor of external regulation (β = -.192, p <.05) and amotivation (β = .195, p <.05).

In relation to SDT components intrinsic motivation was a strong predictor of attitude (β = -.470, p <.001). Introjected regulation was a significant predictor of attitude (β = -.297, p <.05) and pwm (β = -.383, p <.05). Amotivation was a significant predictor of pwm (β = .316, p <.05). Intrinsic motivation was a significant predictor of subjective norm (β = .345, p <.05). Past behaviour was a significant predictor of willingness (β = .233, p <.05). Attitude was a significant predictor of willingness (β = .309, p <.05). External regulation was a significant predictor of subjective norm (β = .198, p <.05). Amotivation was a strong predictor of perceived behavioural control (β = -.381, p <.001). Amotivation was a significant predictor of subjective norm (β = -.203, p <.05) (see Model 1a in Figure 7.1).

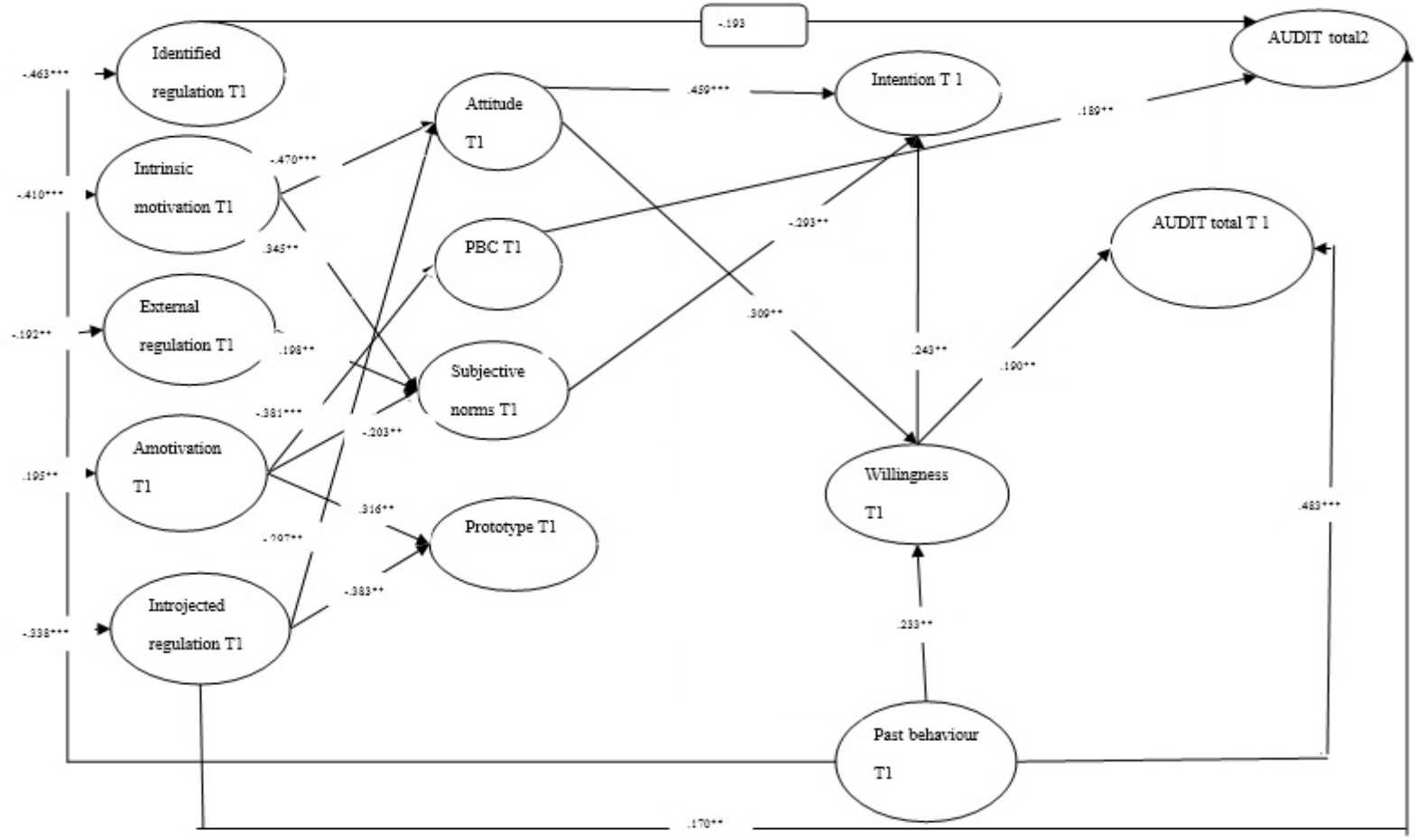

Figure 7.1. Path analytic model of predicting AUDIT total. T1=time 1 (baseline); T2=time2 (3-month follow-up);

** p <.05; *** p <.001

7.6.2 Model 1b Path analytic model of predicting AUDIT problems. The second model was performed to predict AUDIT problems and change over 3-month time in relation to AUDIT problemsb.

The results of the analysis indicated excellent fit to the data ($\chi 2 = 20.159$, df = 18, p= .324; TLI = .980, CFI = .997, RMSEA = .032, PCLOSE=.620). The model predicted 63% of the variance in intention to behave but only 47% of the variance in AUDIT problems and 75% in AUDIT problemsb.

AUDIT problems was a strong predictor of AUDIT problemsb ($\beta = .570$, $p < .001$). Past behaviour was a significant predictor of AUDIT problemsb ($\beta = .198$, $p < .05$). PBC was a strong predictor of AUDIT problemsb ($\beta = -.287$, $p < .001$). Subjective norm ($\beta = -.203$, $p < .05$) and introjected regulation ($\beta = .192$, $p < .05$) were significant predictors of AUDIT problemsb.

Perceived control was a significant predictor of AUDIT problems ($\beta = -.190$, $p < .05$). Willingness was a significant predictor of AUDIT problems ($\beta = .210$, $p < .05$). Past behaviour was a strong predictor of AUDIT problems ($\beta = .484$, $p < .001$).

In relation to prediction of intention, attitude was a strong predictor of intention ($\beta = .479$, $p < .001$). Subjective norm was a significant predictor of intention ($\beta = -.240$, $p < .05$). Willingness was a significant predictor of intention ($\beta = .237$, $p < .05$).

Past behaviour was a strong and significant predictor of intrinsic motivation ($\beta = -.407$, $p < .001$), identified regulation ($\beta = -.462$, $p < .001$) and introjected regulation ($\beta = -.336$, $p < .001$). Past behaviour was a significant predictor of amotivation ($\beta = .199$, $p < .05$). Intrinsic motivation ($\beta = -.469$, $p < .001$), past behaviour ($\beta = .058$, $p < .001$) and identified regulation ($\beta = .196$, $p < .001$) were strong predictors of attitude. Introjected regulation was a significant predictor of attitude ($\beta = -.298$, $p < .05$) and PWM ($\beta = -.382$, $p < .05$). Amotivation

was a significant predictor of PWM (β = .311, p <.05). Intrinsic motivation was a significant predictor of subjective norm (β = .343, p <.05). Past behaviour was a significant predictor of willingness (β = .231, p <.05). Attitude was a significant predictor of willingness (β = .307, p <.05). Amotivation was a strong predictor of PBC (β =- .378, p <.001) and significant predictor of subjective norm (β = -.201, p <.05) (see Model 1b in Figure 7.2).

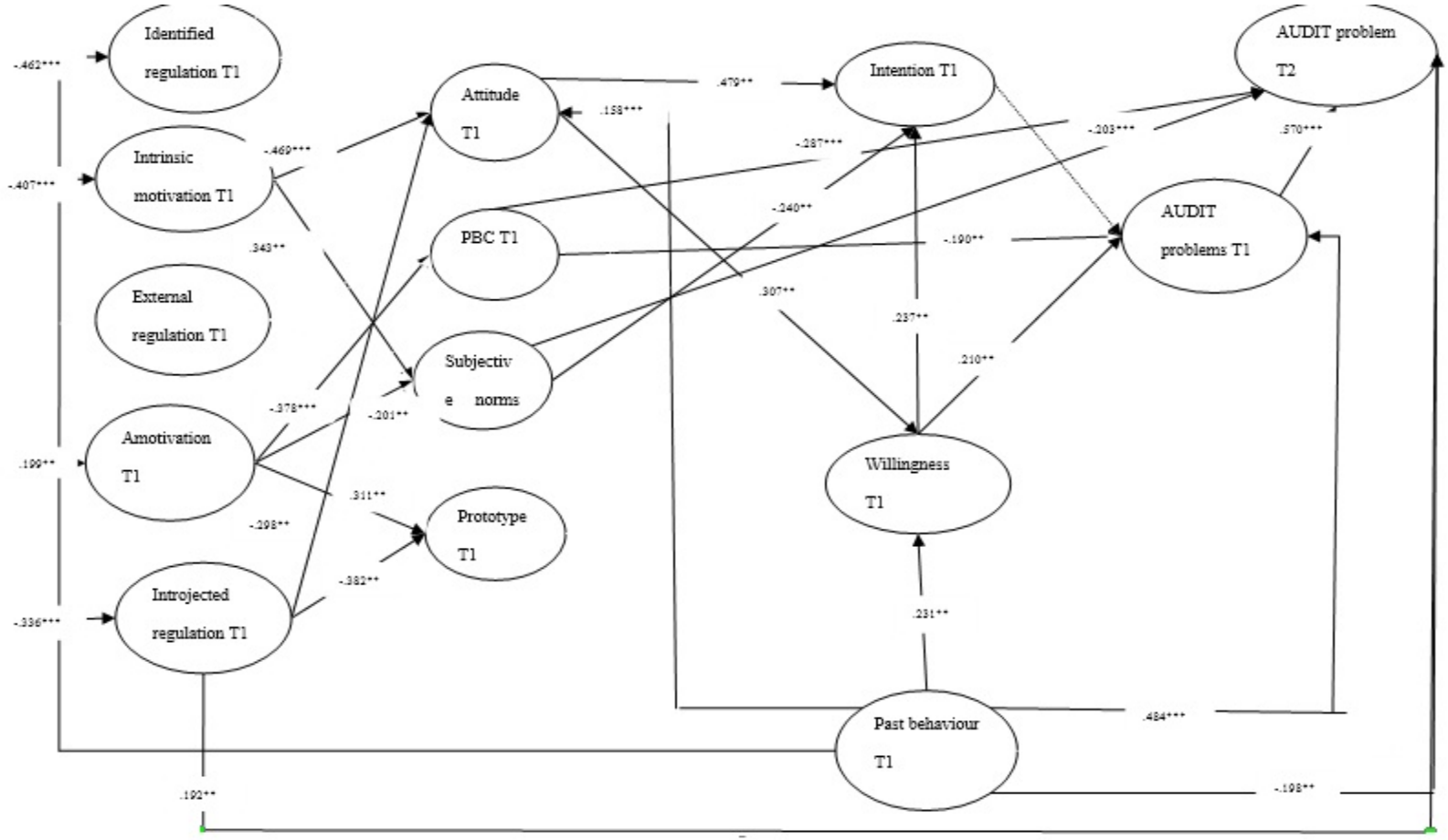

Figure 7.2. Path analytic model of predicting AUDIT problems. T1=time 1 (baseline); T2=time2 (3-month follow-up);

** p <.05; *** p <.001.

7.6.3 Model 1c Path analytic model of predicting AUDIT consumption. Outcome variable, which was entered into analysis of third model, was AUDIT consumption (in time 1) and AUDIT consumptionb (in time 2).

The model indicated excellent fit to the data ($\chi 2$ = 19.551, df = 18, p= .359; TLI = .986, CFI = .998, RMSEA = .027, PCLOSE=653). The model predicted 66% of the variance in intention to behave, 57% of the variance in AUDIT consumption and 75% in AUDIT consumptionb.

A strong predictor of AUDIT consumptionb was AUDIT consumption (β = .530, p <.001) and significant predictors were past behaviour (β = .194, p <.05) and attitude (β = .070, p <.05).

Significant predictors of AUDIT consumption were intrinsic motivation (β = -.212, p <.05), pwm (β = .171, p <.05) and past behaviour (β = .367, p <.05).

Intention was strongly predicted by attitude (β = .470, p <.001), subjective norm (β = -.297, p <.001) and significantly by willingness (β = .244, p <.05). Interestingly, intention did not contribute significantly either to AUDIT consumption or to AUDIT consumptionb.

Past behaviour was a strong predictor of intrinsic motivation (β = -.407, p <.001), identified regulation (β = -.452, p <.001), introjected regulation (β = -.339, p <.001) and a significant predictor of external regulation (β = -.197, p <.05).

In relation to STD components intrinsic motivation was a strong predictor of attitude (β = -.469, p <.001). Inrojected regulation was a significant predictor of attitude (β = -.295, p <.05) and PWM (β = -.387, p <.05). Amotivation was a strong predictor of PWM (β = .322, p <.001). Intrinsic motivation was a significant predictor of subjective norm (β = .347, p <.05). Past behaviour was a significant predictor of willingness (β = .232, p <.05). Attitude was a significant predictor of willingness (β = .316, p <.05). Amotivation was a strong predictor of

PBC (β = -.381, p <.001) and significant predictor of subjective norm (β = -.209, p <.05) (see Model 1c in Figure 7.3).

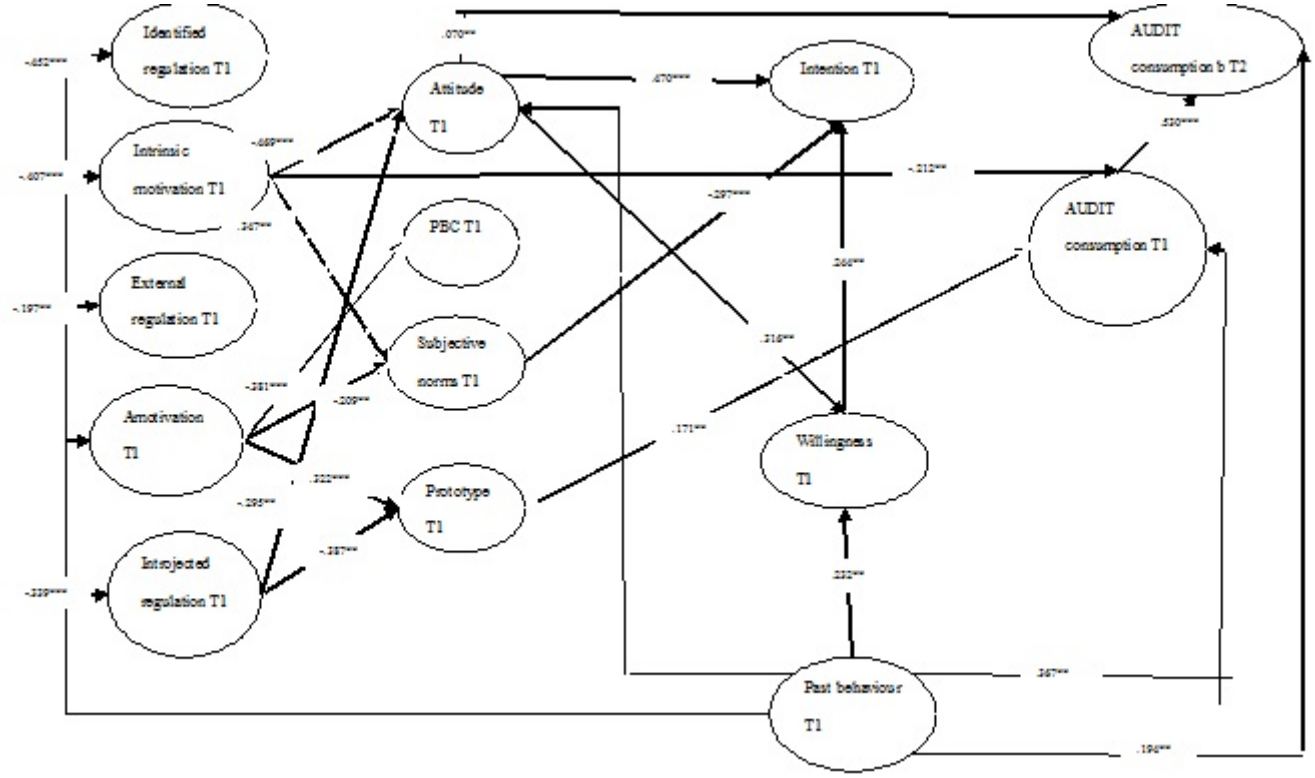

Figure 7.3. Path analytic model of predicting AUDIT consumption. T1=time 1 (baseline); T2=time2 (3-month follow-up); ** p <.05; *** p <.001.

7.6.4 Model 1d Path analytic model of predicting frequency. Fourth model of frequency and frequencyb (frequency in time 2) was analysed, and the results showed the following.

The model indicated excellent fit to the data ($\chi 2 = 17.179$, df = 18, p= .511; TLI = 1.009, CFI = 1.000, RMSEA = .000, PCLOSE=.776). The model predicted 66% of the variance in intention to behave, 20% of the variance frequency and 49% in frequencyb.

Frequency was a strong predictor of frequencyb (β = -.608, p <.001). Significant predictor of frequency was past behaviour (β = .290, p <.05). Significant predictor of frequency was PBC (β = -.295, p <.05).

Intention was strongly predicted by attitude (β = .489, p <.001), subjective norm (β = -.283, p <.001) and significantly by willingness (β = .228, p <.05).

Past behaviour was a strong predictor of intrinsic motivation (β = -.404, p <.001), identified regulation (β = -.448, p <.001), introjected regulation (β = -.344, p <.001) and significant predictor of external regulation (β = -.198, p <.05). In relation to STD components, intrinsic motivation was a strong predictor of attitudes (β = -.474, p <.001). Introjected regulation was a significant predictor of attitude (β = -.296, p <.05) and PWM (β = -.382, p <.05).

Amotivation was a strong predictor of PWM (β = .316, p <.001). Intrinsic motivation was a significant predictor of subjective norm (β = .343, p <.05). Past behaviour was a significant predictor of willingness (β = .240, p <.05). Attitude was a significant predictor of willingness (β = .313, p <.05). Amotivation was a strong predictor of PBC (β = -.377, p <.001) and significant predictor of subjective norm (β = -.211, p <.05) (see Model 1d in Figure 7.4).

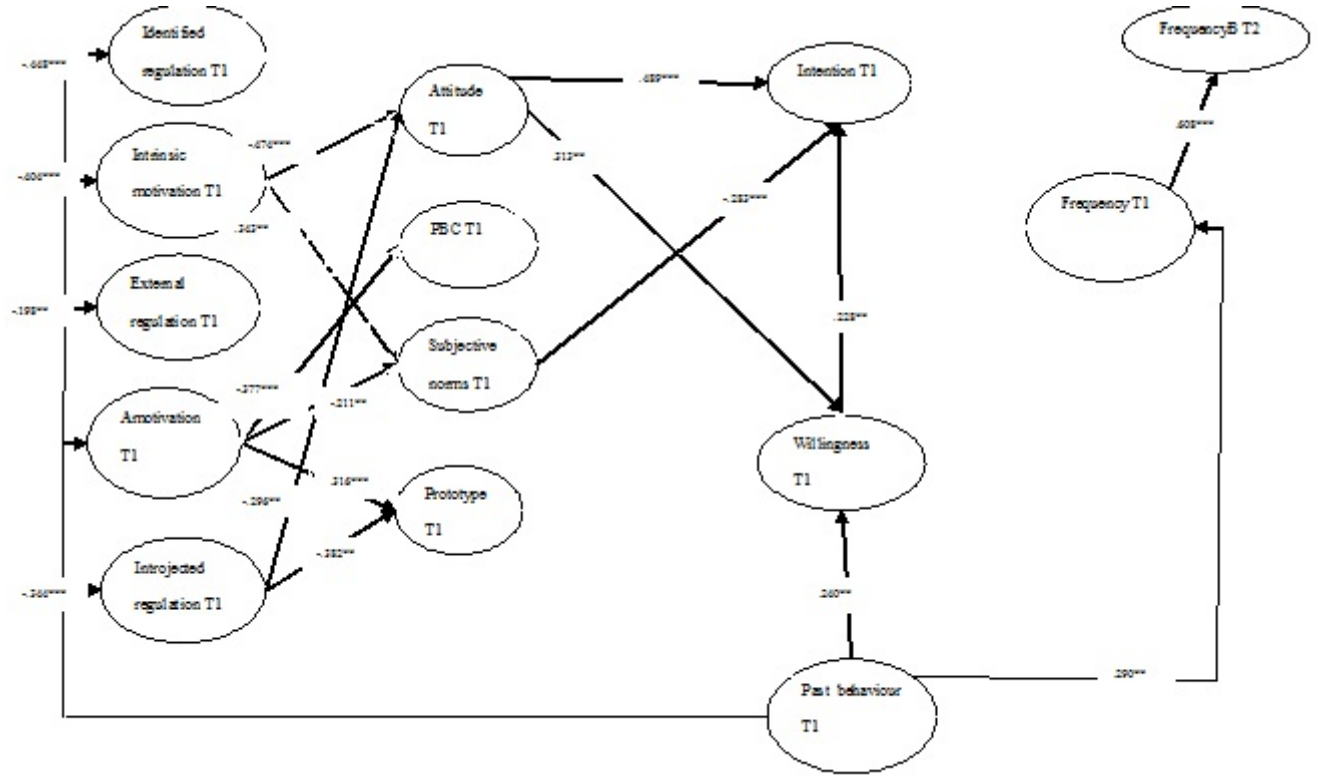

Figure 7.4. Path analytic model of predicting frequency. T1=time 1 (baseline); T2=time2 (3-month follow-up);

** p <.05; *** p <.001

7.6.5 Model 1e path analytic model of prediction of binging. Model 1e with the outcome variables binging (time 1) and bingingb (time 2) showed to fit the data.

The model indicated excellent fit to the data ($\chi 2$ = 16.296, df = 18, p= .572; TLI = 1.016, CFI = 1.000, RMSEA = .000, PCLOSE=.817). The model predicted 65% of the variance in intention to behave, 56% in binging and 61% in bingingb.

The change over time was predicted by binging and past behaviour. Binging (β = .376, p <.001) and past behaviour (β = .458, p <.001) were strong predictors of bingingb. Past behaviour was a strong predictor of binging (β = .619, p <.001).

Intention was strongly predicted by attitude (β = .469, p <.001), significantly by subjective norm (β = -.282, p <.001) and willingness (β = .237, p <.05). As for the previous models, intention itself did not significantly contribute to any of the outcome variables.

Past behaviour was a strong predictor of intrinsic motivation (β = -.406, p <.001), identified regulation (β = -.443, p <.001), introjected regulation (β = -.343, p <.001) and a significant predictor of external regulation (β = -.201, p <.05). In relation to STD components intrinsic motivation was a strong predictor of attitude (β = -.473, p <.001). Inrojected regulation was a significant predictor of attitude (β = -.296, p <.05) and PWM (β = -.385, p <.05).

Amotivation was a significant predictor of PWM (β = .314, p <.05). Intrinsic motivation was a significant predictor of subjective norm (β = .343, p <.05). Past behaviour was a significant predictor of willingness (β = .313, p <.05). Attitude was a significant predictor of willingness (β = .313, p <.05). Amotivation was a strong predictor of PBC (β = -.384, p <.001) and significant predictor of subjective norm (β = -.211, p <.05) (see Model 1d in Figure 7.5).

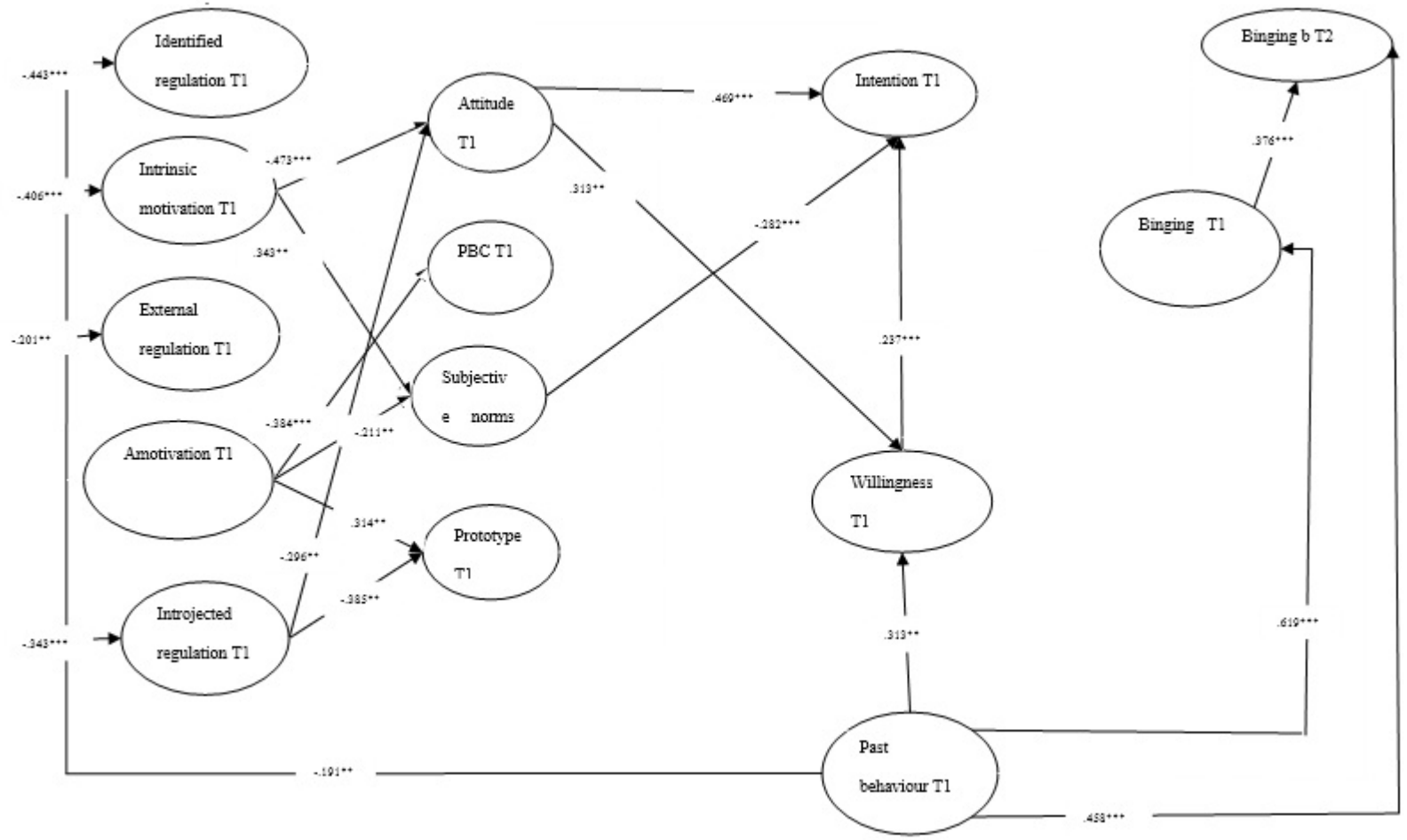

Figure 7.5. Path analytic model of predicting binging. T1=time 1 (baseline); T2=time2 (3-month follow-up);

** p <.05; *** p <.001

7.6.6 Model 1f path analytic model of predicting binging occasions (based on AUDIT item 3). Model 1f aimed to address AUDIT3a and AUDIT3aB as outcome variables. The third item in AUDIT questionnaire was used for this purpose, which aims to look into the frequency of binging.

The model indicated excellent fit to the data ($\chi 2 = 20.004$, df = 18, p= .333; TLI = .982, CFI = .997, RMSEA = .031, PCLOSE=.578). The model predicted 65% of the variance in intention to behave, 58% in AUDIT3a, and 69% in AUDIT3ab.

Change over 3-month time was predicted by AUDIT3a (time 1) and identified regulation. A strong predictor of AUDIT3ab was AUDIT3a (β = .379, p <.001) and a significant predictor was identified regulation (β = -.235, p <.05).

AUDIT3a (time1) was strongly predicted by past behaviour (β = .466, p <.001) and significantly by PWM (β = .226, p <.05).

Intention was strongly predicted by attitude (β = .471, p <.001), subjective norm (β = -.294, p <.001) and significantly by willingness (β = .237, p <.05).

Past behaviour was a strong predictor of intrinsic motivation (β = -.408, p <.001), identified regulation (β = -.445, p <.001), inrojected regulation (β = -.342, p <.001) and a significant predictor of external regulation (β = -.197, p <.05). In relation to STD components, intrinsic motivation was a strong predictor of attitude (β = -.473, p <.001). Inrojected regulation was a significant predictor of attitude (β = -.299, p <.05) and PWM (β = -.391, p <.05).

Amotivation was a significant predictor of PWM (β = .317, p <.05). Intrinsic motivation was a significant predictor of subjective norm (β = .350, p <.05). Past behaviour was a significant predictor of willingness (β = .234, p <.05). Attitude was a significant predictor of willingness (β = .313, p <.05). Amotivation was a strong predictor of PBC (β = -

.380, p <.001) and significant predictor of subjective norm (β = -.209, p <.05) (see Model 1e in Figure 7.6).

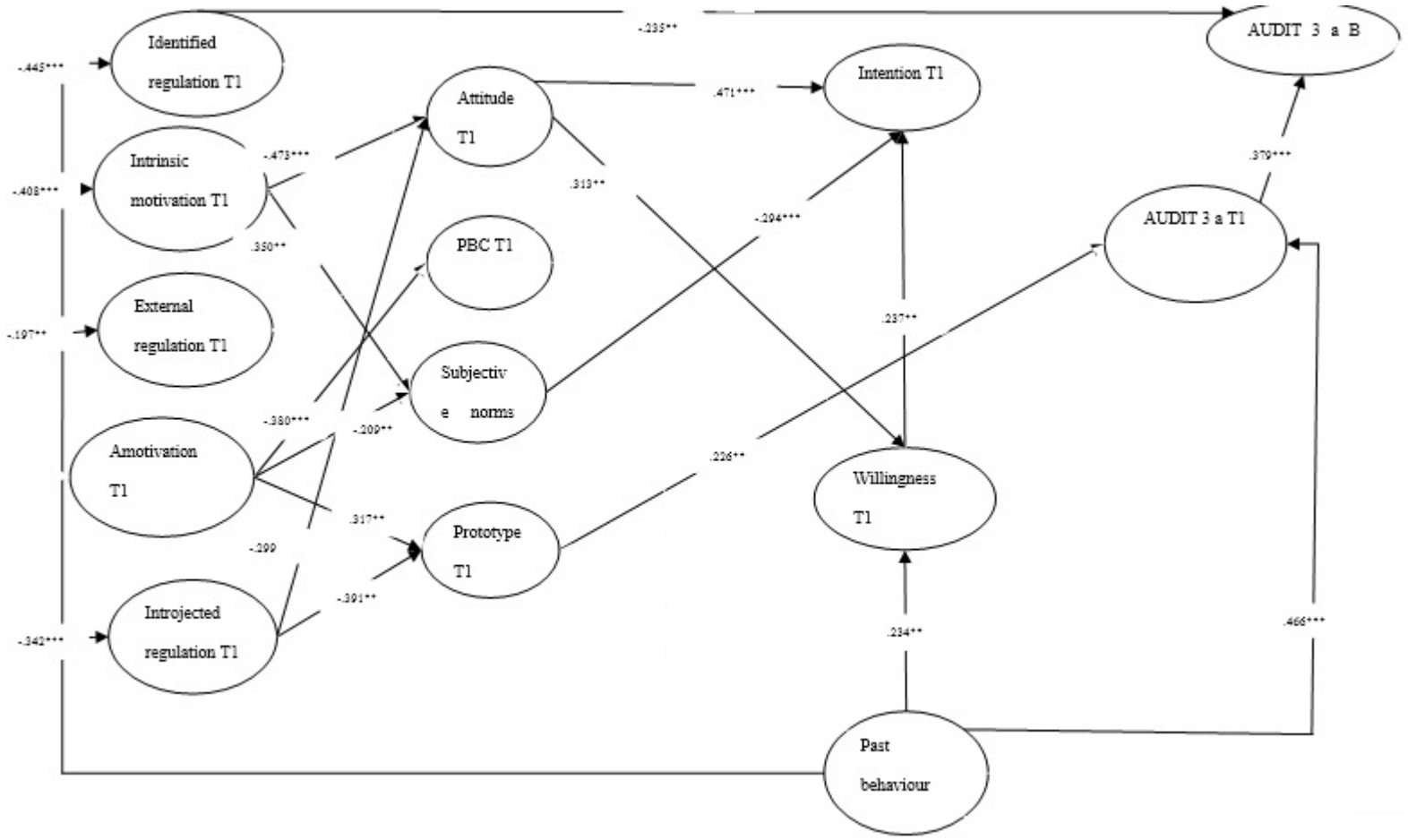

Figure 7.6. Path analytic model of predicting binging (based on AUDIT item 3). T1=time 1 (baseline); T2=time2 (3-month follow-up); ** p <.05; *** p <.001

7.6.7 Model 2a path analytic model of predicting binging (without past behaviour).

Model 2a was aimed to check for outcome variable binging (time 1) and bingingb (time 2) excluding past behaviour as it predicted a considerable amount of variance in previous models.

The model indicated excellent fit to the data ($\chi 2 = 19.675$, df = 17, p= .291; TLI = .972, CFI = .995, RMSEA = .037, PCLOSE=.629). The model predicted 65% of the variance in intention to behave, 28% variance in binging, and 51% of the variance in bingingb.

Only binging was a significant predictor of bingingb ($\beta = .665$, $p < .05$)

Intrinsic motivation ($\beta = -.236$, $p < .05$) and willingness ($\beta = .309$, $p < .05$) were significant predictors of binging.

Attitude ($\beta = .471$, $p < .001$) and subjective norm ($\beta = .471$, $p < .001$) were strong predictors of intention. Willingness was a significant predictor of intention ($\beta = .244$, $p < .05$).

Intrinsic motivation was a strong predictor of attitude ($\beta = -.479$, $p < .001$), introjected regulation was a significant predictor of attitude ($\beta = -.297$, $p < .05$) and PWM ($\beta = -.384$, $p < .05$).

Amotivation was a significant predictor of PWM ($\beta = .318$, $p < .05$). intrinsic motivation was a significant predictor of subjective norm ($\beta = .347$, $p < .05$) and willingness ($\beta = -.192$, $p < .05$). PWM was a significant predictor of willingness ($\beta = .202$, $p < .05$). Attitude was a significant predictor of willingness ($\beta = .321$, $p < .05$). Amotivation was a strong predictor of PBC ($\beta = -.367$, $p < .001$). Amotivation was a significant predictor of subjective norm ($\beta = -.217$, $p < .05$) (see Model 2a in Figure 7.7).

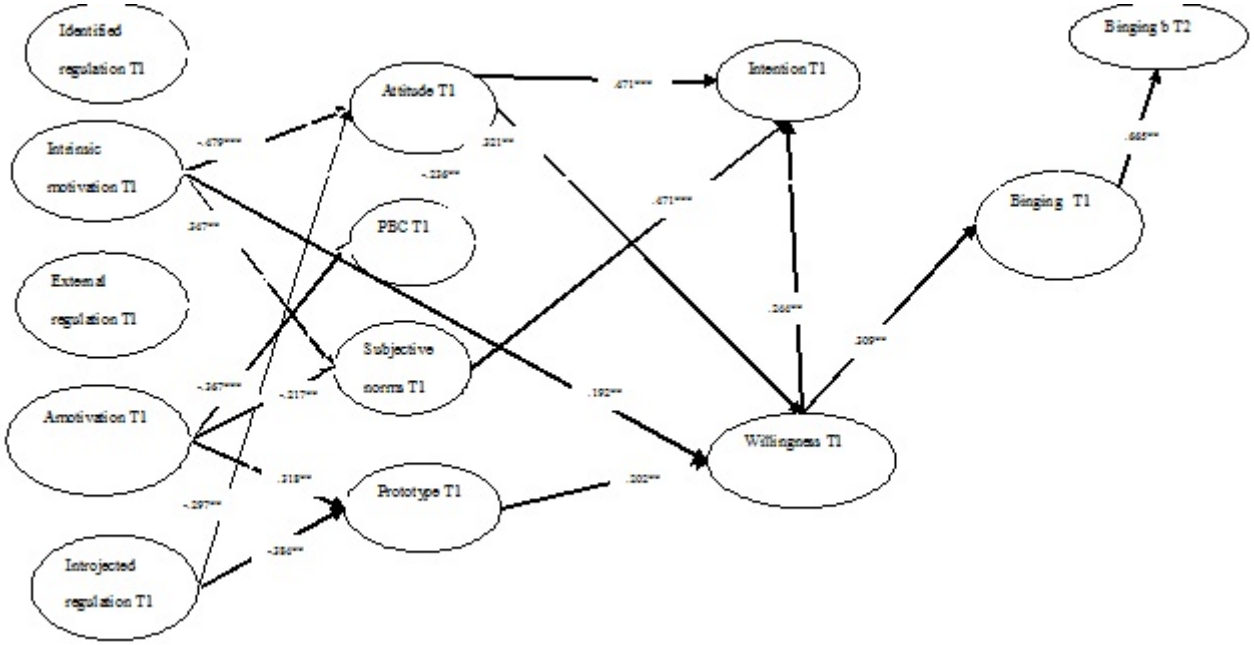

Figure 7.7. Path analytic model of predicting binging (without past behaviour). T1=time 1 (baseline); T2=time2 (3-month follow-up); ** p <.05; *** p <.001

7.7 Discussion

The longitudinal study aimed to evaluate the measures used in the study. The results showed that internal and external validity of the measures were good. The attrition rate was high 65.5% (in time 1 the sample size was N=324 and in time 2 it was N=115). The students who took part in time 1 were recruited for the study with lecturers' consent by advertising research at the beginning or the end of lectures, by distributing leaflets with the link for the questionnaire and by following up the following week. Time 2 questionnaires were collected in the following semester. It was difficult to get in touch with the participants as they were either doing different units or were studying in different sets of groups. The research was again advertised around the university to remind the students to take part in time 2, as they were informed previously.

Regards the participants, 19% drank alcohol over the recommended guidelines in time 1. The same participants, 13%, reported having more than recommended amount of alcohol in time 2. The sample who participated in both times of data collection were with mean age of 27.9, with the standard deviation of 10.8 years, therefore it must be the case that older students do not drink as much as young.

The data for the research was collected in for time 1 starting from November 2015 and time 2 starting from February 2015, it was not time for celebration (e.g., fresher's week usually 2 weeks in October, Christmas or summer holidays) when students would be drinking more than usual. The slight reduction in drinking might be the fact of questionnaire completion.

In order to explore the relationship between outcome variables and TPB and SDT components, Pearson correlation was performed. The relationship between outcome variables frequency, units consumed in a single occasion and binging in time 1, with constructs of TPB and SDT in time 1 have been analysed using Pearson correlation.

The results indicated that frequency showed a significant positive relation to attitude and significantly negatively to self-efficacy and identified regulation.

In regards to units consumed in a single occasion, self-efficacy and intention were significantly positively related and all the constructs of SDT, intrinsic motivation, identified regulation, introjected regulation and external regulation were significantly negatively related.

The results of the correlation analysis on binging confirmed its significant positive relation to attitude, self-efficacy and intention. Subjective norm, intrinsic motivation, identified regulation, introjected regulation, and external regulation were significantly negatively related to binging.

AUDIT total in time 2 positively related to attitude, self-efficacy, intention and amotivation in time 1. Significant negative predictors of AUDIT total in time 2 were subjective norm, perceived behavioural control, intrinsic motivation, identified regulation, introjected regulation and external regulation in time 1.

AUDIT problems in time 2 showed significant positive relation with attitude, self-efficacy and amotivation. Significant negative relation of AUDIT problems in time 2 was observed with time 1 subjective norm, perceived behavioural control, intrinsic motivation, identified regulation, introjected regulation.

AUDIT consumption in time 2 showed significant positive relationship with time 1 attitude, self-efficacy, intention, and significant negative relation with subjective

norm, intrinsic motivation, identified regulation, introjected regulation, and external regulation in time 1.

In relation to the SEM models, in which the components of TPB, PWM and SDT were used, the significant contributors of change in relation to outcome variables were identified regulation, perceived behavioural control, introjected regulation, past behaviour, subjective norm, attitudes or the outcome variable in time 1.

The outcome variable in time 1 was predicted by willingness, past behaviour, perceived behavioural control, intrinsic motivation and prototypes.

In all models intention was best predicted by attitude, subjective norm and willingness. Interestingly, intention was not a significant predictor of outcome variable in time 1 and time 2 when it was checked for change.

In phase II of quantitative research, it was aimed to investigate time 1 SDT, TPB and PMW variables in order to predict time 2 outcome variables. First model in Phase II was to predict AUDIT total in which identified regulation directly predicted time 2 outcome variables. Intrinsic motivation predicted attitude and PBC, external regulation positively predicted subjective norm, amotivation was linked to PBC, subjective norm and prototype, introjected regulation attitude and prototype. In regards to TPB components attitude predicted willingness, subjective norm predicted intention, PBC did not have any significant relation with any of the variables. PWM variables willingness contributed towards intention and time 1 outcome variable. Past behaviour was contributing to all SDT components, willingness and outcome variable in time 1. Outcome variable was predicted with willingness and outcome variable in time one was predicted by identified regulation, PBC, and introjected regulation (see Figure 7.1).

Model 1b (see Figure 7.2) predicted AUDIT problem in time 2. Identified regulation did not contribute to any of the variables, intrinsic motivation was negatively

linked to attitude and positively to subjective norm, external regulation did not contribute to any variable, amotivation had a negative relation with PBC and subjective norm and positive relationship with prototype, introjected regulation negatively predicted attitude and prototype. In regards to TPB components, attitude contributed positively to intention and willingness, PBC contributed towards AUDIT problems in time 1, subjective norm was directly predicting AUDIT problem in time 2 and intention both had negative relation, prototype did not predict any of the variables. Willingness positively predicted intention and AUDIT problems in time 1. AUDIT problems in time 1 was predicted negatively by PBC, positively by willingness and past behaviour. Past behaviour also contributed to identified regulation, intrinsic motivation, introjected regulation negatively, and amotivation positively. Also it had positive effect on attitude, willingness and negative effect to AUDIT problem time 2. AUDIT problems in time 2 was predicted by PBC, subjective norm and past behaviour negatively, and AUDIT problems in time 1 positively.

Model 1c (see Figure 7.3), STD components identified regulation did not predict anything, intrinsic motivation contributed negatively to attitude, and AUDIT consumption in time 1. and positively to subjective norm, external regulation did not contribute to anything, amotivation was related negatively to PBC, subjective norm and positively to prototype, introjected regulation was significant negative contributor towards attitude and prototype.

In model 1, direct predictors of change (AUDIT total 2) were identified regulation and PBC. It seems students who have highly valued goals to perform positive health behaviours and have control over the behaviour will be contributing towards positive change in the behaviour over time. This result is in line with Hagger et al.'s (2012) findings. All outcome variables, frequency, binging, AUDIT consumption,

AUDIT problems decreased. Intrinsic motivation was a significant predictor of attitude and subjective norm, which is different to time 1 models in which intrinsic motivation did not predict any of the variables. The results were similar to Caudwell and Hagger (2015), intrinsic motivation predicted attitude and subjective norm. Hagger et al. (2012) reported not intrinsic but identified regulation to be predicting attitude and subjective norm. The results of the present study in relation to intrinsic motivation can be interpreted that students who are intrinsically motivated to keep within safe limits have less favourable attitude towards drinking, and they feel have more control over their behaviour. External regulation was a predictor of subjective norm as for the time 1 models it was predicting attitude and PBC. Students who keep their alcohol intake within safe limits to gain reward or avoid negative consequences seem to believe that significant others would disapprove them drink. In Caudwell and Hagger's (2015) research results were not similar as it was reported controlled motivation to predict subjective norm.

Amotivation had similar relation with attitude, subjective norm and prototype as for time 1 models. Limited number of previous studies included amotivation (Hagger & Chatzisarantis, 2009), introjected regulation predicted attitude and prototype. The more students felt guilt and shame towards drinking, the less favourable attitude towards drinking and less favourable prototype image they had. Attitude was a significant predictor of intention and willingness, the same was observed in time 1 models. Positive attitude towards drinking predicted willingness to drink and intention. Subjective norm predicted intention, and willingness predicted both intention and AUDIT total time 1. Student who perceive that the significant other approve their behaviour would have less intention to engage in drinking. Past behaviour predicted all five components of SDT, willingness and AUDIT total in time 1.

In regards to mediation effect, relation between controlled motivation and intention was through attitude and subjective norm. Caudwell and Hagger (2015) reported the same. External regulation intention was mediated by subjective norm. Caudwell and Hagger (2015) had to reject the hypotheses of controlled form of motivation predicting intention was mediated by subjective norm. In the present study, introjected regulation and intention relation was mediated by attitude, whereas Caudwell and Hagger (2015) had rejected the hypothesis that was of the same nature.

In model 1b which predicted AUDIT problem in time 2, predictors of change were PBC, subjective norm, introjected regulation and past behaviour. Interestingly, PBC was not coming up a significant variable in time 1 models. The results suggest that people who are internally motivated to keep within safe limits and who have higher level of control over the behaviour would be more prone to perform positive health behaviour. In the context of alcohol "self-control is important in regulating the behaviour", as in social environment people tempted to drink to conform with social norms which effects their health negatively (Hagger, Wood, Stiff, & Chatzisarantis, 2009, p. 221). People need "self-regulatory resources" to resist the temptation of drinking (Hagger et al., 2009, p. 221). The students who are motivated to keep within safe limits to avoid shame and guilt would be drinking more. Audit problems in time 1 was predicted by PBC, willingness, past behaviour. This suggests that people who have higher PBC encounter less alcohol related problems. The more willing they are to drink and the more they drank over last 6 month predicts more alcohol related problems. Attitude and subjective norm predicted intention. Hagger et al. (2012) reported three variables predicted intention: attitude, subjective norm, PBC. The more positive attitude people have to more they intend to drink. If they perceive that people important to them disapprove of the behaviour, the less they will be intending to drink. Willingness was

predicted by attitude and past behaviour. More positive attitude towards drinking and more drinking in the past predicts more willingness to drink. Intrinsic motivation predicted attitude and subjective norm. Being intrinsically motivated to keep within safe limits means a decrease positive attitude to drink, and an increase in people's perception that important others will disapprove of their drinking. The fact that autonomous motivation effects intention and behaviour is more likely to be reflective rather than impulsive (Strack & Deutch, 2004). The same results were reported about relation of autonomous forms of motivation (identified and intrinsic motivation) to attitude and subjective norm but not PBC in Caudwell and Hagger (2015). In current research, either also identified regulation or intrinsic motivation predicted PBC. Amotivation predicted PBC, subjective norm and prototype, which can be interpreted that being careless towards keeping within safe limits of consumption signifies that those people have less perceived behavioural control over the behaviour, the more they think that important people to them would approve them drinking and the more positive prototype image of a drinker they have. Introjected regulation predicted attitude and prototype. The more they motivated to keep within safe limits out of guilt and shame the less positive attitude they have towards drinking and they have less favorable image of a drinker. Past behavior predicted identified regulation, intrinsic motivation, amotivation, interjected regulation and AUDIT problems in time1 and AUDIT problems in time 2. The interpretation of these results would sound in a following way, the more people drink the less autonomous motivation (identified regulation and intrinsic motivation) they have over drinking, the more they drink the more they will be amotivated to keep within safe limits and they would not care about keeping within safe limits. The more they drink the less guilt or shame they will have over keeping within safe limits. The more they drink the more alcohol related problems they will have and the more they

drink the less change. In model 3 change (AUDIT consumption time 2) was predicted by attitude, AUDIT consumption time1 and past behaviour. As AUDIT consumption was declining in time 2. AUDIT consumption time 1 was predicted by intrinsic motivation which is interesting, prototype and past behaviour. Although previous research did not include prototype and past behaviour, direct relation of autonomous motivation to intention was observed which was statistically significant. No direct interaction of controlled motivation to intention was observed neither in the current study nor in Caudwell and Hagger (2015). The more people consumed the less they are intrinsically motivated to keep within safe limit, the more favorable attitude they had of a prototype of a drinker and the more the more they drank in last 6 months. Intention was predicted by attitude, subjective norm. Positive attitude towards alcohol predicts more intention to drink and less perceived approval of a significant others toward the behavior. Identified regulation did not contribute significantly. Attitude was predicted by intrinsic motivation and introjected regulation. This can be deciphered the more people are intrinsically motivated to keep within safe limits, the less positive attitude they have towards drinking. The more they keep within safe limits because of shame and guilt, the less favorable attitude they have towards drinking. PBC was predicted by amotivation. The relationship was negative, which means people who are amotivated to drink within safe limits have less perceived behavioural control. Subjective norm was predicted by intrinsic motivation and amotivation. The relation could be evaluated that the more people are intrinsically motivated to keep within safe limits the more they think significant other would disapprove of their drinking behaviour, the more amotivated they are to keep within safe limits the more they think significant other would approve the drinking behaviour. Prototype was predicted by introjected regulation. Past behaviour contributed towards all STD variables except for

amotivation. Past behaviour also contributed towards willingness and AUDIT consumption time 1 and AUDIT consumption time 2. The more people drank in the last 6 months, the less autonomous motivation they have or the less they feel shame or guilt to perform the behaviour (introjected regulation). The more people drank over last 6 months the more willingness they had to drink and the more alcohol they consumed after 3 month time.

Model 1d and model 1e, change in frequency of drinking was predicted by frequency in time 1, and change in binge drinking was predicted by binging in time 1 and past behaviour. No other contributors of change were identified. All other variables showed similar contribution in variance to model 1c (see description for Model 1c) (except for the attitude, it predicted change in Model 1c).

In model 1f, contributors of change (AUDIT 3 time 2) were identified regulation, AUDIT 3 time 1 and past behavior. Being more internally motivated towards highly valued goal (identified regulation), less units consumed is a predictor of a change in units in 3-month time. AUDIT time 1 was predicted by prototype and past behaviour. The more positive image of a drinker people have and the more they drank over last 6 month, they scored high on AUDIT. Components of STD had similar relation to TPB and PWM components. TPB and PWM components had similar relation as in model 1c (see Model 1c description). Past behavior contributed to all the SDT components except for amotivation, it also contributed to willingness AUDIT 3 time 1. The more people drank over the last 6 months, the less autonomous motivation they had. Interestingly, the same negative relation was observed in relation to both controlled motivation (external regulation and introjected regulation): the more they drank, the less they had controlled motivation to keep within safe limits.

In model 2a, past behaviour was deleted as it was interacting with most of the variables and causing noise. Change (binging time 2) was only predicted by binging time 1. Intrinsic motivation and willingness was direct predictor of binging time 1. Having intrinsic motivation to keep within safe limits predicted more binging occasions and more willingness to drink. The direct interaction of intrinsic motivation is interesting as no previous studies reported such a relationship. Intrinsic motivation was a direct predictor of willingness. Attitude directly predicted intention and willingness like in most of the models. Having more positive attitude towards drinking predicted more intention and willingness to drink. Subjective norm predicted intention. Attitude and subjective norm predicted intention in Caudwell and Hagger (2015). Interesting that the relation was positive. The more they thought significant other would disapprove of behaviour the more willing they will be to drink. Prototype predicted willingness. Having more positive prototype image of a drinker predicted more willingness to drink. Intrinsic motivation predicted attitude and subjective norm. Having intrinsic motivation to keep within safe limits predicted less positive attitude towards drinking. Amotivation subjective norm and prototype. Introjected regulation predicted attitude and prototype.

Table 7.20

Time 2 models

Models	χ^2	*df*	CFI	TLI	RMSEA	PCLOSE
Model 1a Path analytic model prediction of AUDIT total	18.708	18	.999	.994	.019	.699ns
Model 1b Path analytic model of prediction of AUDIT problems	20.159,	18	.997	.980	.032	.620ns
Model 1c Path analytic model of prediction of AUDIT consumption	19.551	18	.998	.986	.027	.653ns
Model 1d Path analytic model of prediction of	17.179	18	1.000	1.009	.000	.776ns

frequency						
Model 1e Path analytic model of prediction of binging	16.296	18	1.000	1.016	.000	.817ns
Model 1f Path analytic model of prediction of binging occasions (based on AUDIT item 3)	20.004	18	.997	.982	.031	.578ns
Model 2a Path analytic model of prediction of binging (without past behaviur)	19.675	17	.995	.972	.037	.629ns

7.8 Chapter Summary

This chapter has presented the results of a longitudinal study. The results included the reliabilities of the questionnaire in time 2 and the validity. In addition, paired t test was performed to check for the changes in the variables over time and their significance. Path analysis has been performed to explore for several outcome variables (based on the models used in time 1) and the change in over time. The next chapter will explore the factors that contribute towards students' alcohol consumption with the use of qualitative methods, such as interviews.

Chapter Eight: Qualitative Analysis of Interview Data

8.1 Introduction

In this chapter the methods and the findings are presented from Phase III of the mixed methods research. As is mentioned earlier in Chapter 3, the purpose of qualitative research is to gain an understanding of factors (personal and environmental) influencing students' alcohol use. Also, factors need to be explored further to check for relationship and causation between them.

The objective of qualitative research was to investigate the relationship amongst aforementioned components. The chapter begins with the description of methods used in the design, data collection and the analysis of the qualitative data. Section 8.2 is to provide this information followed by Section 8.3 in which information about participants is provided. The findings are presented in Section 8.4. Section 8.5 covers the discussion of those findings. Section 8.6 is a summary of the chapter.

8.2 Methods

8.2.1 Setting. The qualitative phase of the study was organised at the University of Bedfordshire in Luton.

8.2.2 Fieldwork preparation. In February and March 2015, the researcher set up the objectives for further qualitative research. During quantitative data collection, the researcher was able to introduce and advertise research in several departments at the university. This enabled her to receive support towards qualitative part from the departmental staff within the university in order to recruit students for interviews. Additionally, the students who participated in the first phase of the research were willing to support and assist. They also supported by bringing their peers to take part in the research.

8.2.3 Sampling methods. The interview sample was drawn from the participants who took part in Phase 1. Twenty-three participants were selected for the interviews using homogeneous sampling (Teddlie & Yu, 2007). The potential interviewees were undergraduate students. The interviewees were sent invitation letters with information sheet about the research (see Appendix A.1 and A.2 for the copy of invitation letter and information sheet). In order to maximise participation, the interviewees were offered interviews to be conducted on weekdays and at weekends, during the day, or evening time.

8.2.4 Data collection. The qualitative data was collected between May and June 2015 through semi-structured interviews. The interview schedule was developed to explore students' alcohol use in relation to TPB, PWM, SDT components and coping strategies (see interview schedule in Appendix D.1). The open-ended questions, probes, visual aids, visual models and contextual scenarios were used during interviews. Prior to main interviews, pilot interviews were conducted to check for the clarity and order of the questions. The information concerning these interviews is presented in this section.

8.2.4.1 Interview process. All the participants were asked to complete a consent form prior to the interview. The consent form included the information about the research, telephone numbers for national helplines and student support services at the university for the participant to contact in case distress was caused (see consent form in Appendix D2). At the end of the consent form, participants provided the name of the first school they attended, city of their birth, month of birth and star sign to enable match the data of interviews and questionnaires. The participants were asked a number of questions and directed with the use of prompts.

The interview was set up in several stages. First, it started by eliciting general information with questions about the frequency of alcohol use, the amount of alcohol

consumed in a single occasion and past behaviour. The following sets of questions were about attitudes towards drinking, questions addressing subjective norm, self-efficacy, perceived behavioural control and intentions then followed. Last set of questions were about prototype of a drinker, prototype similarity, coping strategies, motivation to drink and motivation not to drink. Later, alcohol expectancies both negative and positive were discussed. The last set of questions was about drinking whilst being a student, drinking at university, how messages were communicated, the difference between drinking in halls of residence and drinking in private accommodation. At the end of the interview, students were asked for any comments in order to make the interview more effective or anything that could have been improved. The ideas were noted during the interviews.

The researcher conducted interviews. At a time she held MSc in Health Psychology and was working as a Lecturer of ESOL and Modern Foreign Languages. She had previous experience of conducting interviews during language research, attended trainings organised by Psychology Department at the university and volunteered to assist Social Work Department in focus groups in order to gain more experience. The participants were not familiar with the researcher prior to the interviews. They were only informed about the reason of conducting the research. The researcher's interest in the topic comes from her experience working for probation offices as an interpreter, where she came across many drug and alcohol addicts, and whose behaviour she would like to understand. In addition, coming to the UK, she realised that the drinking culture is different to the one of her home country. She was also touched by personal events in her life, as to how alcohol can affect families and lives of people, which motivated her to carry out current research. Most importantly, the research can be applied within universities to improve students' wellbeing.

8.2.4.2 Pilot interviews. As mentioned in Section 8.2.4 pilot interviews were conducted prior to the main data collection. The pilot interviews aimed at communicating the clarity of the questions, pace of interview and use of visual aids. One female and one male student were invited to the interview. Both of them were not known to the researcher but both expressed their will to assist in the research during quantitative data collection when the first contact was made. The participants were asked if they could think of the ways to improve the interview such as if any unclear questions were asked or terminology was abstruse. For this purpose, the participants of the pilot study were given a piece of paper and a pen at the beginning of the interview to write down their comments.

The participants' feedback was valuable. One participant mentioned the importance of explaining the units of binge drinking before asking questions in relation to binge drinking. It was an effective way of progressing to a topic. In the following interviews, the phrase *binge drinking* was used in combination with drinking 6 or more units for a female participant and 8 or more units for a male participant. In addition, at the end the interview participants were asked about their future use of alcohol as they felt it would help students to reflect on their drinking habits. The pilot study was used for main analysis and only minor changes were made to the initial interview schedule. Two electronic devices were used to record pilot study: a voice recorder and an Apple iPod touch-16GB. These allowed the researcher to check the quality of recording for the interviews to be conducted. Both devices produced a good quality of recording.

8.2.5 Data analysis. The transcripts were analysed using qualitative methodology framework analysis (Ritchie & Spencer, 2002). "Although framework approach reflects the original accounts and observations of the people studied (that is, "grounded" and inductive) it starts deductively with pre-set aims and objectives" (Pope,

Ziebland, & Mays, 2000, p. 116). The methodology has been commonly used within applied policy research (Ritchie & Spencer, 2002). Framework analysis consists of systematic and rigorous way of data analysis, which consists of five stages: familiarization, identifying the thematic framework, indexing, charting and mapping and interpretation (Pope, Ziebland, & Mays, 2000; Ritchie & Spencer, 2002). This way of analysis is used when there is a need to connect quantitative findings with qualitative findings. The analysis allows the data to be assessed by another researcher rather than "primary analyst" (Pope, Ziebland, & Mays, 2000, p. 116). Data collection and analysis are more structured and explicit and allows identifying negative and untypical cases (Pope et al., 2000). Each category is thoroughly examined using "constant comparison", by which each category is compared to the rest of the data and more categories and themes are derived rather than trying to reduce data. Later some cross indexing is needed as during indexing a large amount of "fuzzy categories" emerge which later should be reduced by linking the ones which fit together (Pope et al., 2000, p. 114). Each code is compared to find the categories. The categories are usually searched inductively. Later the data is investigated in a deductive way keeping the objectives of the research under consideration. "Deductive analysis is less common in qualitative research but increasingly being used, for example in the framework approach" (Pope et al., 2000, p. 114).

8.2.5.1 Transcription. The researcher transcribed the interview verbatim. The verbatim was matched to the recording in order to check for the accuracy of the transcript by another researcher. In order to maintain confidentiality of the participants, they were given pseudonyms. Any data, which would make interviewees identifiable, was replaced with different names for places and important dates were altered. While transcribing, memos were created to record ideas related to the particular piece. Notes

were kept on the participants' reaction. The participants' comments about the interview were written down and included as memos. It was aimed to transcribe interview immediately after the interview where it was possible. After the interview, the participants' views, comments and reflections were recorded. The transcripts were checked for accuracy by listening to the recording in a slow mode. The transcripts were uploaded to NVivo Version 8.0, software designed for qualitative researchers to transcribe interview verbatim. The data was analysed manually (Ritchie, Spencer, Bryman, & Burgess, 1994).

The interview data were analysed using framework approach (Ritchie et al., 1994). Currently, framework approach is widely used in health research. It offers systematic and transparent data analysis and comprised of several stages: familiarization, identifying thematic framework, indexing, charting and mapping and interpretation. The detailed description of the process is outlined in the section below.

8.2.5.2 Familiarisation. The familiarisation started during data collection to be 'in the field' allows the researcher to reflect on the data is being collected (Pope et al., 2000). The audio recordings were listened to several times during transcribing. Reading through the scripts also assisted in familiarising with the interview data. Initial ideas were recorded in the margins and memos were created. Any ideas of the participants, which were different to the others, and any causal relationships mentioned during the interview were also noted. Familiarisation with data helped to understand the issue from each participant's perspective and to find differences in participants' personal views. In addition, it assisted in understanding what participants value most and what is important to them.

8.2.5.3 Coding. The transcripts were coded by the researcher. During coding, the left hand margins were used to write down the codes and labels. Sometimes there was a

single code used; in other cases, labels which would help to remind of the meaning and the purpose of the word, phrase, or the sentence. Any ideas during coding were written down in the right hand margins. Sometimes there were obvious causal effects expressed by the participants, those were drawn in a graphical way on a separate document. Any additional questions asked during following interviews and clarification of some ideas was noted as well. In order to identify important issues for the participants, the frequency of a particular message was noted. In order not to lose the meaning, the notes and memos were written down while coding. During coding, the variables which were explored, were written down in the right margin as the analysis of the interviews were based on deductive analysis of qualitative data which is increasing in qualitative research especially within the framework approach (Pope et, al., 2000) (see an example for coding in Figure 8.1).

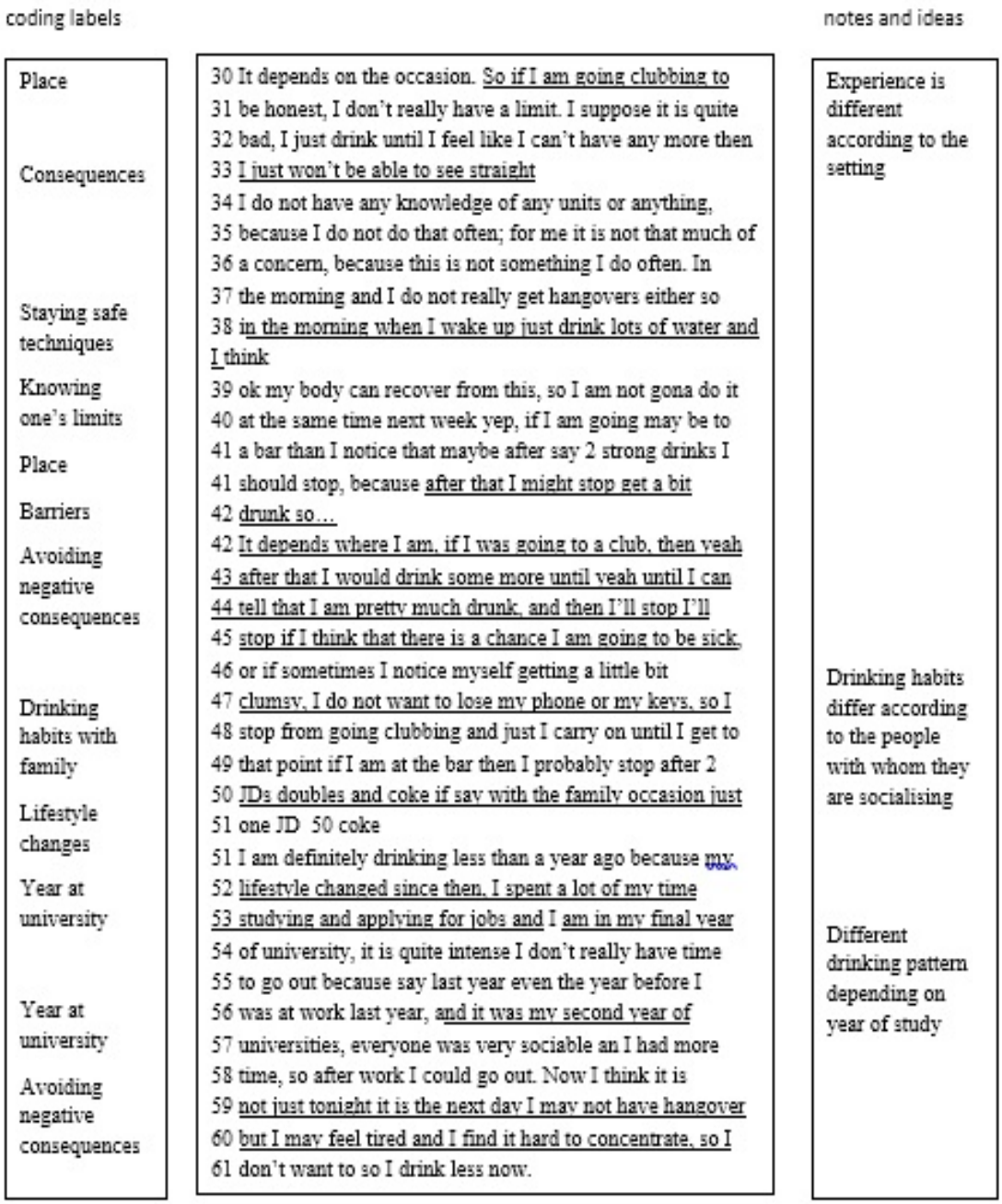

Figure 8.1. Example for coding

Initial coding enabled to group the codes in several categories. For example, under *barriers* the factors which would stop people from drinking were grouped. The factors mentioned were: avoiding negative consequences, responsibilities, self-image and negative memories (see Figure 8.2).

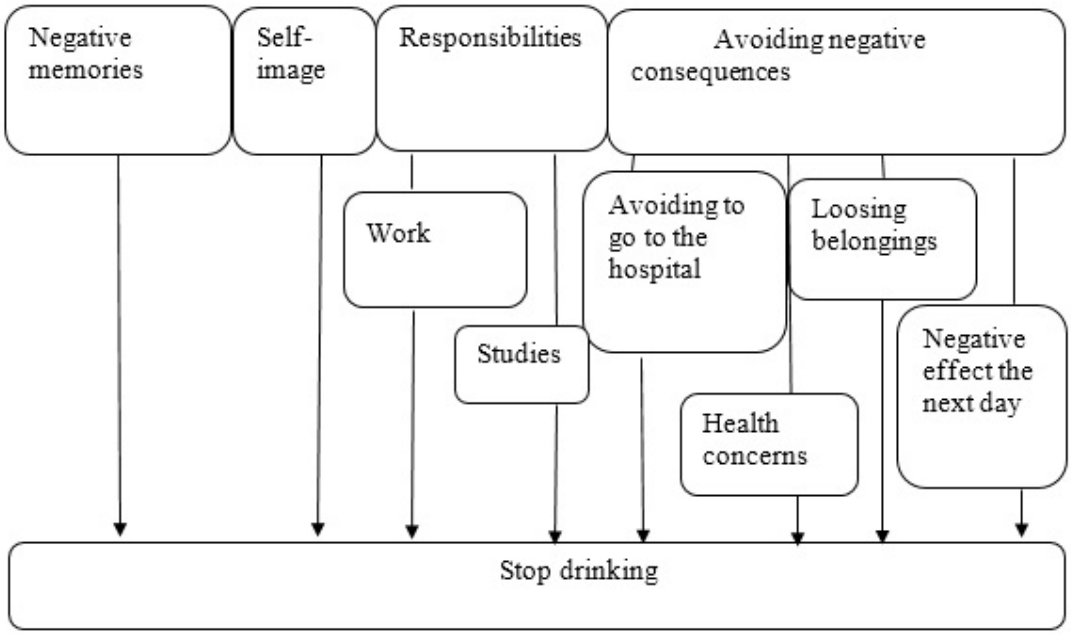

Figure 8.2. Barriers

Another example, the factors which were showing to be effecting excessive alcohol use or sensible use were age, limits, length of drinking session availability of drinks/favourite drink and the students' year of study (see Figure 8.3).

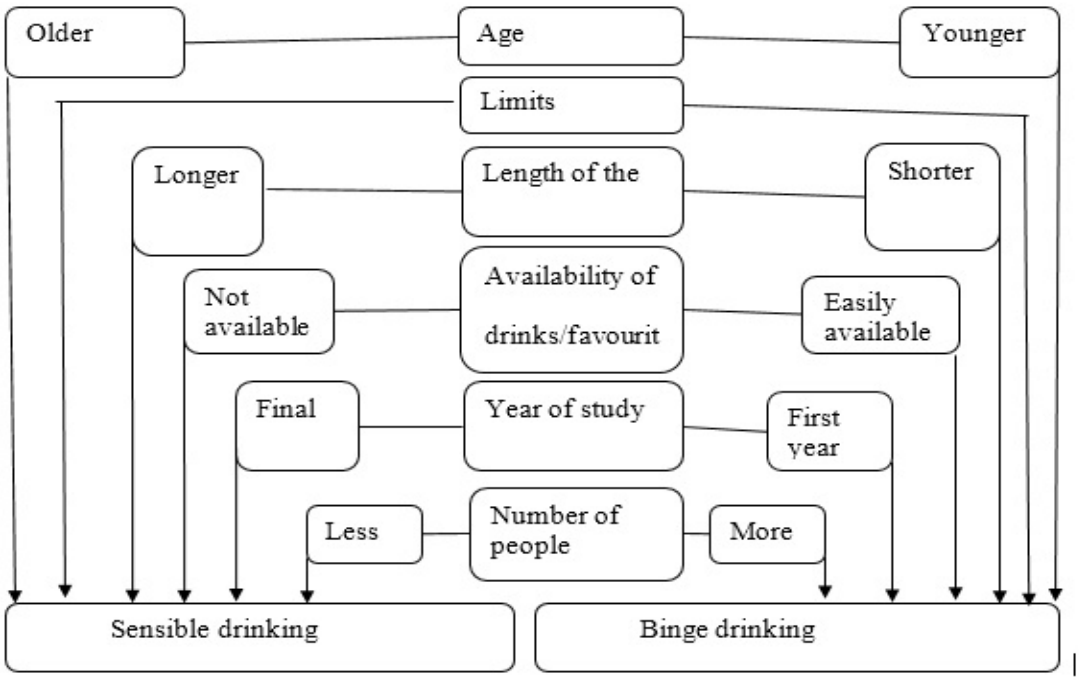

Figure 8.3. Factors predicting sensible or excessive alcohol use

8.2.5.4 Identifying thematic framework. The passages which were coded were looked through with the intention of scanning for information in order to help answer research questions. Sometimes it was difficult to define; for example, either to code it as 'health concerns' or 'barriers'. In this case, it was necessary to conceptualise before coding. Participants mentioned about health concerns while they were talking about the barriers of drinking. It was clear from the interview when participants were mentioning what 'stops' them from drinking over the limits they mentioned health concerns to be a barrier. Another barrier was thinking of possibilities of having health concerns they or their friends might as a consequence of excessive consumption. The codes needed to be looked at several times in case some of them could have been merged into one or in a situation when two meaningful codes could have been created out of one (see thematic framework in Table 8.1).

After examining the data and codes, an initial analytical framework was created. The codes and a brief definition of the codes were taken notes to make it easier to identify codes and draw codes into meaningful groups. While coding, the transcript was revisited in case new codes emerged, those codes were recorded. The coding continued until no more new codes were added and no more changes in the framework were made. At the end, altogether 32 codes were recorded and they were grouped under 5 categories of the analytical framework created with 5 interview data (see Appendix C.3 for example of matrix).

Looking at the map it was clear that each category had both personal and social factors, which explained the alcohol consumption affected by two major factors (see Figure 8.4).

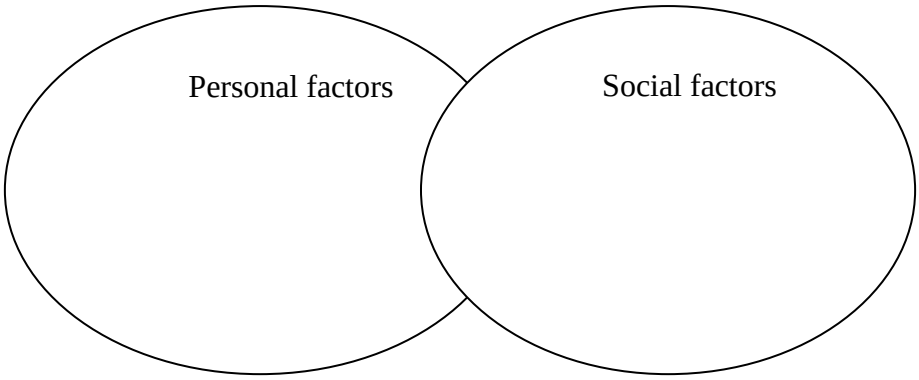

Figure 8.4. Personal and social factors in alcohol use

According to the participants' responses, it was clear that there were; for example, established habits or behaviours of alcohol use according to the social context there were in. Either they were with family and friends, or the number of people with whom they were drinking. On the other side, they reported their mood to be an indicator of their drinking habits. They would drink more if they were in a good mood. It was decided to use contextual conditions as a main category for the themes (Strauss & Corbin, 1998).

Under the category of intervening conditions, the significant themes were clustered together. For example, a third year student who got a job by the end of the course drank less alcohol. Thus, "lifestyle changes" have been classified as intervening conditions (Strauss & Corbin, 1998).

After clustering all the themes, the following analytical framework was identified for the purpose of this study.

Table 8.1
Thematic Framework

Code	Description
Action/ interaction	
Positive effect on health, body and self	Any positive effect reported in relation to health and body
Negative effect on health, body and self	Any negative effect reported in relation to health and body
Causal conditions	
Positive alcohol expectancies	Any positive expectations in relation to alcohol
Negative alcohol expectancies	Any negative expectations in relation to alcohol
Intervening conditions	
Age	Any age related information reported and how it is linked to alcohol use
Lifestyle changes	Information about change or circumstances in life in relation to work, study and family and how it has affected alcohol use
Responsibilities	Work, study, family any other responsibilities reported
Information/ knowledge	Students' need for knowledge and information
Future self/role model for children	Information about future self
Self/self-image	Students' ideal self-image
Perception of prototype of a drinker and non-drinker	Perception of prototype of drinker, non-drinker, any similarities and differences in character or behaviour participants mention
Motivation to stay within safe limits	Factors keeping students away from drinking

Negative life events	Effect of negative event to a person's alcohol use
Attitudes and beliefs	Attitudes and beliefs in relation to drinking
Expectations (person's)	Students' expectations of situations
Intention	Students' intention to engage in alcohol consumption
Knowing one's limits	Knowing the limit and what it means from students' perspective
Finances	Finances and drinking
Willingness, strong will and will power	Being able to refuse alcohol or willingness to drink
Economy	The effect of current economy on behaviour
Boredom	Boredom being a reason to drink
Perceived difficulty and ease to drink	Finding easy or difficult to drink
Coping strategies	Coping strategies students use
Personal decision	Drinking is a personal decision
Person's state	State of person after consuming alcohol
Enjoyment of the effect	Enjoyment of the effect of alcohol
Lack of time	Being occupied, having no time for drinking and its effect
Policy	Any policies implemented within university: bar, student union, student village etc.
Accessibility	Any facts making alcohol accessible to students
Acceptance	Accepting oneself and problem

	drinking
Denial	Not acknowledging a problem of excessive substance use
Personality	Any personality characteristics
Addiction	Addiction to alcohol
Contextual conditions	
Family, friends, colleagues/ familiarity of people and their expectations	Pattern in alcohol use while with family, friends and colleagues
Location/activity/duration of drinking session	Location, activity and length of drinking and its role in consumption
Number of people	Number of people involved in drinking sessions and its effect on personal drinking
Mood	Mood during drinking sessions
Enjoyment of occasion	Enjoyment of drinking session
Availability of drink/ favourite drink	Availability of drinks and how this is related to consumption.
Year of study	The year students study and drinking behaviour observed during that particular year
Other people's drinking behaviour	Other people behaviour and its effect
The way of being	Customary habits within the culture
Drinking alone	The reason for drinking alone, its consequences
Religion	Religion and being religious and how it is effects students
Culture	Drinking culture at university, drinking culture of different ethnic groups, drinking culture of sports groups and different faculties
Environment	Effect of the environment on

	behaviour
Communicating messages and effect of social media	Sources of communication
Experimenting	Experimenting with alcohol
Consequences	
Avoiding negative consequences	The facts mentioned to avoid as a consequence of drinking/binge drinking
Drinking to cope	Information in relation to alcohol use for coping reasons
Staying safe techniques	The techniques students use to stay safe and minimise harm

8.2.5.5 Applying the analytical framework (Indexing). Identified analytical framework was applied to each transcript. Passages relating to the themes were highlighted in the transcript in order to prepare for indexing. After indexing additional codes have emerged making 122 altogether, which was later, reduced and added to the thematic framework. Below is an example of a transcript to which analytical framework was applied (see indexing in Figure 8.5).

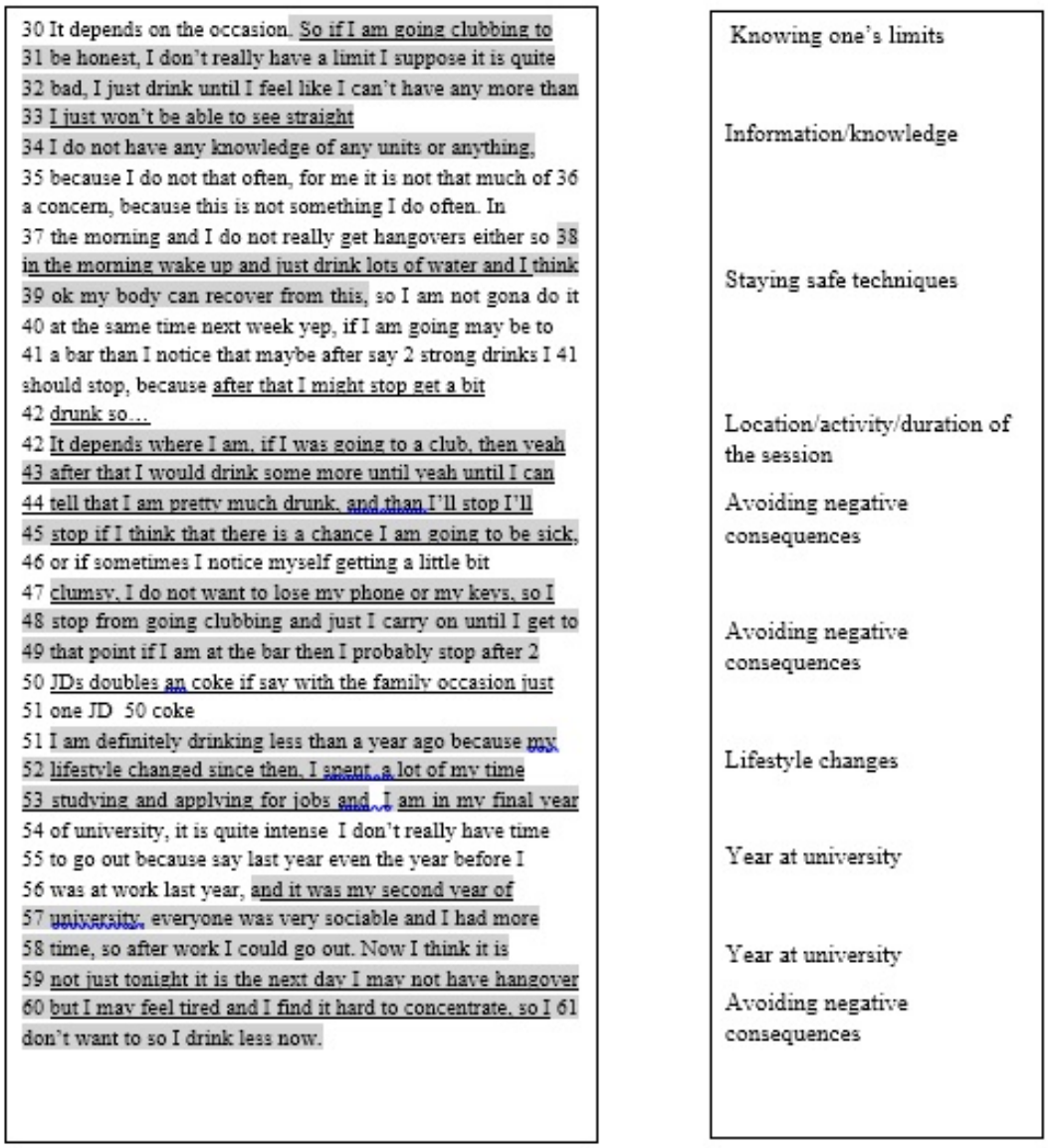

Figure 8.5. Indexing

8.2.5.6 Charting data into framework matrix. After the data was coded using the final analytical framework, it was time to transfer to a matrix before being analysed. Microsoft Excel was used in order to create a matrix. One sheet of Microsoft Excel document was used for each category. Every participant had a line in each sheet and one column was assigned for each code within the category. The chunks of text used during

Indexing were summarised and entered into the matrix (see an example of framework matrix in Appendix D3).

8.2.5.7 Mapping and interpretation. The matrix clearly presented the data. It assisted in identifying the themes and explored the phenomenon by drawing connections within and between the participants and categories (Richie et al., 1994). Interpreting data enables to answer research questions and at the same time to define any underlying ideas. The memos kept during the framework analysis process later were added into interpretation, which gave more in depth insight into the analysis done.

8.2.6 Methodological quality. Methodological quality was maintained by following Guba and Lincoln (1985) views on trustworthiness of the research study which includes credibility, transferability, dependability and conformability. Credibility was achieved by prolonged engagement and building rapport with the students, their lecturers and the departments within the university. As the interviews were part of the mixed methods research the analysis of both quantitative and qualitative part will be used for triangulation of data. At different stages of the research, peer debrief was used. The transcripts were sent back to participants for checks (Guba & Lincoln, 1985).

Transferability is defined to be applied in the qualitative research to see if the results are generalisable. Phase III and Phase IV of the research was conducted to complement each other and the results were put together to see if any similarities in views about students' alcohol use were found. Dependability is defined to be an agreement between several researchers on the accuracy and validity of the study, in which interpretation of findings and conclusions are supported with the data. In order to achieve accuracy of the interpreted data in relation to findings a fellow researcher was involved to check for the accuracy of coding and interpretation (Guba & Lincoln, 1985).

Conformability can be achieved by four means: conformability audits, audit trial, triangulation and reflexivity. Conformability audit was achieved by seeking feedback from another researcher as it was explained earlier in the chapter. Audit trial – reporting the steps taken to analyse data and keeping original supporting documents. A detailed description of the analysis is provided in the chapter. Triangulation of interview data was performed to achieve conformability. Reflexivity is known to be the attitude of the researcher in each stage of his research. In order to increase the validity peer researchers were involved during research and reflexive diary was kept to record reflection on the data. (Guba & Lincoln, 1985).

8.2.7 Ethical considerations. The ethical approval was received from the University of Bedfordshire Psychology Department Ethics committee. The research was based on ethical conduct (BPS, 2011). The participants were asked to complete a consent form prior to the interview. The consent form included the information about the research and phone numbers for national helplines and university support services in case the interviews were to cause any distress to the participants. The participants were also informed about how the data would be used, and if it was to be published the results would be published as groups, or interviews will be used anonymously with pseudonyms of participants. They were informed that the participation was voluntary and they could withdraw from the study if they wished to do so. The interviews were recorded only with the participants' consent (BPS, 2011).

Anonymity and confidentiality was maintained throughout the research. Participants were given pseudonyms and all the data which would make them easily identified was replaced with different words (e.g., place names, street names etc.). The transcripts, consent forms, recorders were kept in a locked storage in the Department of Psychology. No names of participants were required while filling out consent form. To

enable the research to match the data of quantitative and qualitative research, the name of the first school participants attended, month of their birth and their star sign was used (BPS, 2009; 2010).

8.3 Interview Informants

Interview informants consisted of 23 university students.

8.4 Findings

The findings from the qualitative analysis of the interviews with students are presented below, and described in the following order.

- Action/ interaction
- Causal conditions
- Intervening conditions
- Contextual conditions
- Consequences

8.4.1 Action/ interaction.

8.4.1.1 Positive effect on health and body. Interviewees reported the following changes like increased confidence (P-7, P-14, P-15, P-23) and becoming social to be a positive effect of alcohol. In addition, alcohol helps dealing with stress and depressed mood (P-11, P-15). It helps them to loosen up and enjoy the evening (P-11, P-15). It also helps with falling asleep (P-15, P-19). Communication becomes easier as alcohol relaxes. Here are the views of P-11 and P-21 on it:

"I speak my mind even more, I meet more people and became extra sociable", (P-19)

"If I am trying to cope with something, I expect to wash down the sadness. If I am out with the friends, I expect to increase my enjoyment" (P-11)

Tolerance was viewed within positive effect context. By building tolerance to the taste of alcohol and the alcohol itself, students could increase their consumption. The interviews showed most of the participants do not like the taste of alcohol.

"But I am sure you know how it is like, when you start drinking alcohol and it starts effecting you, you start getting a little bit drunk you find it easier to keep drinking more, cause obviously, when you drink your body wants more and keeps going. That's why you know you start drink spirits and staff like that cause it starts to get easier to drink but I find it quite hard at first but then it starts getting easier" (P-1)

8.4.1.2 Negative effect on health, body and self. Negative effects were reported to be physiological changes in the body "skin starts to break out" (P-20), "organs are racing, blood pressure is higher" (P-23). P-19 in addition to physiological changes, described the stages she went through during alcohol consumption, which had an effect on her to stop conversing with others, it seemed her image of herself changed and she became a different person:

"I am a very extraverted person I like to talk but when I get to the point then I stop talking to people I don't know why but I just turn into complete opposite than what I am, different person. Probably I would not feel good. As I said I get sick from alcohol. Probably I would try to avoid it. It does my stomach around and I cannot smell alcohol. Sadly, it usually happens if I do not eat. I get dizzy, stop having sensations in my fingers, I know when sickness is coming and I stop, when I start to feel like that I stop, become aggressive agitated, I stop talking to others", (P-19)

However, P-18 who was previously addicted to drugs and alcohol pointed out about addictive properties of substances. He commented on addiction as body getting tolerant; "when you have shocked your body the first time with any drug. it automatically gets used to it again" (P-18), excessive use led to physical addiction and

he also mentioned about addiction to be a mental illness he developed over the years he was using substances "Anytime I had food I was sick. And that's the only time I felt physical addiction so … but yeah suicidal thoughts" (P-18), which affected his memory. Here is what he recalled:

"I think there are boundaries. Basically, I have first class degree here you know. Not many people can actually say that and you don't get that for no reason that's hard work that's determination, yes it is part of my addiction as well but boundaries of that is I am getting an awesome job. I am gona learn a lot more things that I am going to like and getting smashed I just forget things very quickly. And my memory is not the best as it is I put my body through so much drug and alcohol where I do have memory problems" (P-18)

8.4.2 Causal conditions.

8.4.2.1 Positive alcohol expectancies. Relaxation has been mentioned by several participants as one of the effects of alcohol (P-5, P-14, P19, P20, P22). For example, "Relax mainly, that's what I use it for" (P-14). P-29, talks about her relaxing and becoming more sociable (P19, P21, P22, P23) and confident (P-4, P-7, P-9, P-11, P21, P23), "I think it helps me to be less conscious and more confident" (P-7). Gained confidence helped to meet new friends "I speak my mind even more I am generally to meet new people I become extra sociable so ..." (P-20). P21 says he sees alcohol helps him to relax, gives peace and mentions about it being a means of escape "makes you relax, gives peace, you forget about things for a while", (P-21) and "positive sides is … stress relieve" (P-15). Alcohol is also believed to be helping with creativity (P-19, P-22) "what I noticed was interesting, when I drink whisky it somehow enhances my creativity" because it frees people up from judgements (P-19, P-23) "what I can think of

it loosens certain things in your mind …. I am very self-judgmental person". The participants reported about alcohol's medication effect, it helps her with insomnia (P-14, P-19) "because I have sleep disorder…I noticed that before if I drink a glass of wine, I am not saying I do it often…otherwise I am fidgeting (P-19). In addition, positive alcohol expectancies were about having 'fun', feeling happy, having a good time and gaining more confidence for the time being (P-11, P-5, P-1, P22, P23) "…. feel happy, confidence, I become friendly, caring, bubbly, lively, dancing, singing, confidence but it is temporary confidence" (P-22). Several participants reported the confidence gained to be able to enjoy the evening and be able to dance (P-7, P-12). At the same time, they mentioned it be not long lasting "mainly being less shy, fake confidence" (P-4).

8.4.2.2. Negative alcohol expectancies. Negative alcohol expectancies were clearly stated as a cause to health problems (P-19, P-20, P-23) "I am not drunk but tipsy and I started to notice that I would kind of get stomach aches after drinking, so I thought my skin start to break out, so for those reasons I would not do it too often" (P-3). Two participants mentioned about alcohol having negative effect. For example, P-19 mentioned about her: "I was not happy and got agitated so I drink less", she mentioned about "overthink things". Trying to avoid the consequences alcohol might cause, being involved in any type of accidents "instances involving drink driving" (P-17) and ending up in a hospital seems to stop people from drinking (P-21):

"I do not like visiting a doctor, hospital, going for consultation for any reason. If you drink, you see yourself encountering accidental scenarios. You might be involved in accidents at home, outside anywhere, that the main reason I do not want to drink" (P-21)

One participant mentioned alcohol being an addictive: “Alcohol something you can get addicted to if you drink beyond your control, I don’t want this to happen” (P-23). Another side effect was to have a hangover (P-15).

8.4.2.3 Escapism. The participants talked about consuming alcohol as a way of escape. Depending how much they drank escape differed. For example, mostly students talked about it as being a confidence builder and it helps you forget about everything else (P-7, P-1) “I think it is just confidence and makes you to forget about everything else and just enjoy like what going on right now” (P-11)

” … or helps when person is down or depressed (P-1, P-11) also helps with coping handling bad marks at the university (P2). Although there were some answers when students did not approve their peers drinking to gain confidence or for escape purposes (P-2, P -11) “cause someone like father is just”

And it seems in addiction alcohol was helping with handling those negative emotions by switching off from it (P-18). “I have had years of abuse as a child, you know …my regular trait to deal with things was to get drunk so I would switch off. Cause I could not handle the feeling. So ...” (P-18)

8.4.3 Intervening conditions (see Appendix C.5).

8.4.4 Contextual conditions (see Appendix C.5).

8.4.5 Consequences (see Appendix C.5).

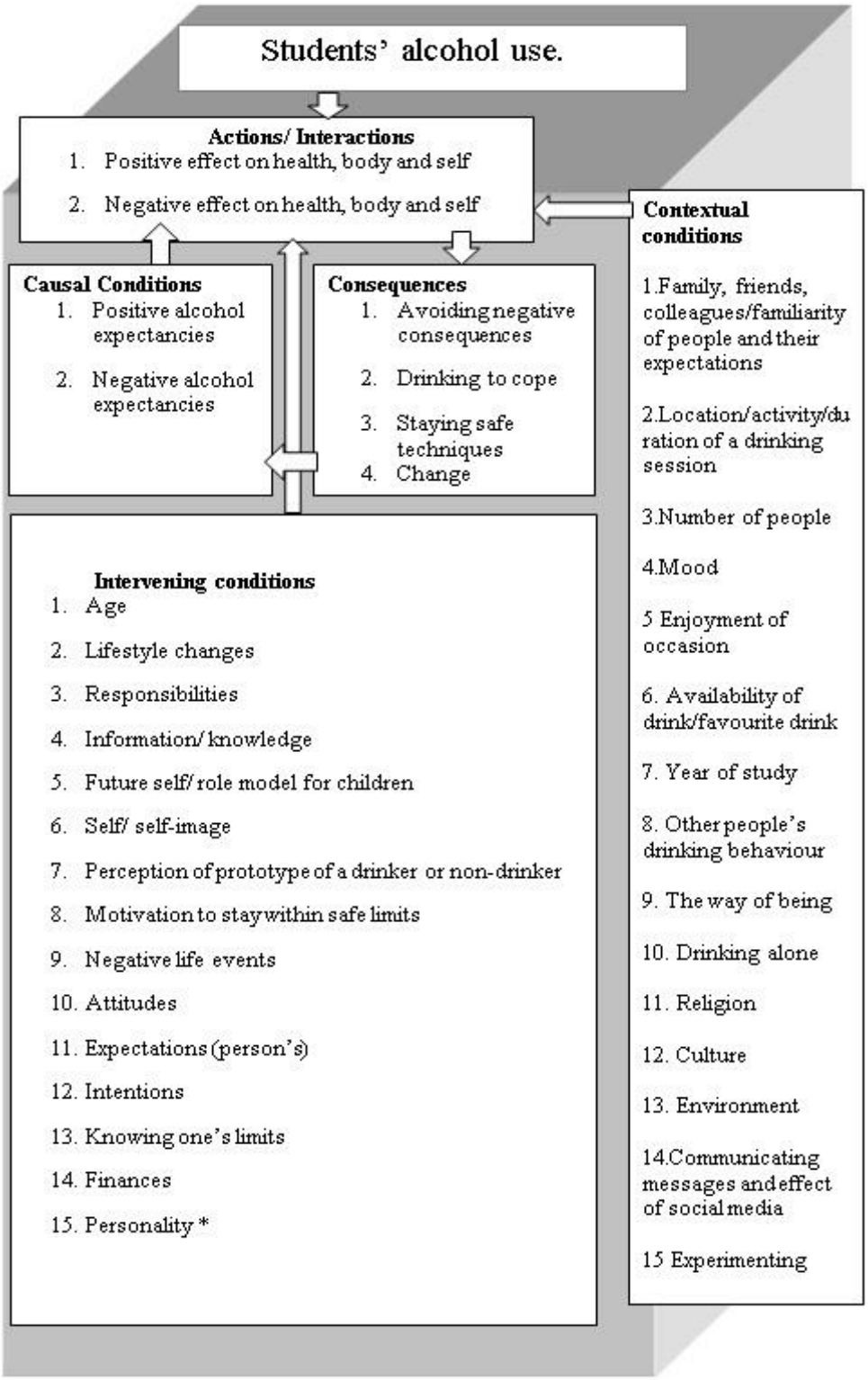

Figure 8.6. Conditional matrix for interviews

* additional themes emerged for intervening conditions

16. Willingness, strong will and will power
17. Economy
18. Boredom
19. Perceived difficulty and ease to drink
20. Coping strategies
21. Personal decision
22. Person's state
23. Enjoyment of the effect
24. Lack of time
25. Understanding one's personality and body
26. Policy
27. Accessibility
28. Acceptance
29. Denial
30. Addiction

8.5 Discussion

Interviews conducted with students gave insight into the students drinking behaviours. As it was mentioned earlier, the number of variables included to be researched provided very rich data. It was clear that the drinking behaviours included not only psychological factors but a combination of social, socioeconomic and psychosocial factors which was recurrent in the present study (Tilki, 2006). The richness of the data provided by interviews yield to explore the behaviour in a wider context and the results were organised and matched to previous study on the behaviour (Van Wersch & Walker, 2009).

The themes emerged from the research were in-line with conditional matrix in grounded theory by Strauss and Corbin (1998), though the data was analysed using framework analysis (Richie & Spencer, 2002) and using deductive approach (Gale, Heath, Cameron, Rashid, & Redwood, 2013). Action /interaction, causal conditions, intervening conditions, contextual conditions and consequences were used to organise the data (Van Wersch & Walker, 2009).

Fitting the data into a conditional matrix allows to explore the experiences in different levels and offers broad non-linear explanation to the behaviour than social cognitive models (Van Wersch & Walker, 2009). At the same time the application of framework analysis allowed to locate the components of the social cognitive theories in the matrix created. For example, attitudes and beliefs students have about alcohol is under intervening conditions, intervening condition changes the impact of causal phenomena (Strauss & Corbin, 1998). If the data is explored further it would be possible to see particular beliefs and attitudes students hold which cannot be defined by a quantitative study. In addition, motivations to stay within safe limits were defined as intervening condition. If the data of the interview explored further, it could be seen that student who is concerned more about their health would be more likely to abstain from drinking, which would be an example for having internal valued goal to perform positive health behaviour (identified regulation) (Deci & Ryan, 1985).

The number of participants used for the research was 23 as the interviews were used as complementary research to explore the possibilities of explanatory nature offered by qualitative study in the current mixed method research. The data obtained from 23 participants allowed seeing the impact of factors emerged and put them into the context and seeing where they fit in the matrix. In addition, the data received from participants still allowed to define conditions mentioned in Strauss and Corbin (1998). Below the explanation of the matrix is provided.

The relation of causal, contextual, and intervening conditions with action/interaction signifies a changing process. Action/interaction, consequences, causal conditions and the interaction between them is about boosting action/interaction of binge drinking as the behaviour was given positive connotations. Intervening conditions refer to the situations in which action/interaction may be interrupted, leading to planned

decision not to binge drink, despite cultural habits, traditions and social norms. The contextual conditions underlie the social loop indicating either increase or decrease of binge drinking process over time and place in varying spontaneous situations. When drinking behaviour is presented in conditional matrix, the model based on the conditional matrix signifies constant interaction of action/ interactions, condition and consequences in 3 dimensional ways, in which the time and space the behaviour occur as 3rd dimension.

The interactions of conditions, consequences and action/interaction and the way they are connected are not linear as shown in the matrix. None of the conditions happen in a direct manner. The explanation of the conditions would be following. Action/interaction evolves overtime as person defines or gives meaning to situations. Causal conditions are the happenings which influence the behaviour. Intervening conditions mitigate or otherwise alter the impact of causal conditions on phenomena. Contextual conditions are the conditions which create circumstances for the person to respond through action/interaction. These circumstances are created by the interaction of the conditions dimensionally, at certain time and place. Consequences-whenever there is action/ interaction (or lack of it) taken in response to an issue or a problem or to manage or maintain a certain situation there are ranges of consequences some might be intended, and others not.

Actions/ Interactions

Positive effect on health, body and self (see section 8.4.1.1): Increased confidence (P-7, P-14, P-15, P-23), becoming sociable reported to be positive effect. In addition, other properties of alcohol were mentioned. For example, it helps to relax and cope with depressed mood (P-11, P-15), or helps to go to sleep, it increases the enjoyment. The more alcohol is consumed the more tolerant the body becomes, which is

seen to be positive as it allows students to handle more drinks (P-1). Confidence, relaxed mood and decrease in inhibition were previously reported to be positive experiences (Van Wersch & Walker, 2009).

Negative effect on health, body and self (see section 8.4.1.2): Physiological changes were mentioned to be negative effect, drunkenness led to become "different person" and "stop talking to others" (P-19). P-18 talked about addictive properties of alcohol, in which excessive alcohol use was a way for him to build tolerance, in consequence, he got addicted to alcohol and later he noticed mental and physical addition. Although he gave up currently, he has memory problems and irritable bowel syndrome, which was developed, after his addictive behaviour. Van Wersch and Walker (2009) also found similar results; participants reported hangover, losing control, becoming more aggressive and becoming more intimate with opposite sex as negative effect of binge drinking.

Causal Conditions

Positive alcohol expectancies (see section 8.4.2.1): Most of the participants cited "relaxation" as one of the main positive effects alcohol provides (P-5, P-14, P-19, P-20, P- 22). Feeling confident in social gatherings was also important. Enhanced creativity was connected to becoming less judgmental of oneself (P-23). One of the motivational factors of heavy alcohol consumption was gaining confidence (Lee, Maggs, Neighbors, & Patrick, 2011; Orford, Krishnan, Balaam, Everitt, & Van der Graaf, 2004). They confirmed that for college student drinker's social satisfaction is one of the most motivating factors for drinking alcohol. In addition, Lee et al., (2011) found that for college student drinkers' social satisfaction is one of the most motivating factors for drinking alcohol. The same came out from the results of the interview as participants highlighted the importance of confidence building properties of alcohol which enables

them to make friends or approach a person of opposite sex which they would not be able to do so without having drunk.

Negative alcohol expectancies (see section 8.4.2.2): Negative effect on body, becoming agitated, over thinking things, road accident which might be caused was mentioned by participants. Some students would not drink to avoid ending up in a hospital. There was a line when getting addicted to alcohol was mentioned. The research in the area of expectancies was more about positive alcohol expectancies. A number of studies by Jones and McMahon (1994) showed the importance of not only positive but negative alcohol expectancies to restrain from drinking, negative alcohol expectancies were important in decision making in non-problem drinking than positive alcohol expectancies.

Escapism (see section 8.4.2.3): Alcohol served as escape from low mood, depression, bad marks. One participant talked about escape from both negative and positive emotions. Escapism came out as a theme in Van Wersch and Walker's (2009) study, in which participants reported excessive use of alcohol to forget their problems.

Intervening conditions

Age (see Appendix C.5 for 8.4.3.1): Becoming 18 was to put a lot of emphases on as it is legal age to be allowed to drink alcohol. At the same time, it is when most of the students start their education at university. Even fresher's week is arranged around alcohol (P-2). Participants talked about drinking at 15 and 16, and it has been related to violence and fighting. First year students reported more alcohol use than 2nd or 3rd year students. Research by Grant & Dawson (1997) showed that late onset of consumption leads for less abuse and dependence on alcohol.

Lifestyle changes (see Appendix C.5 for 8.4.3.2): Several events were mentioned to be changing habits of drinking. For example, starting the university leads

to increase in behaviour, being a third year student is time to be applying for jobs so the consumption decreases, for male students having a girlfriend was related to decrease in drinking. Research by Rúdólfsdóttir and Morgan (2009) showed drinking pattern was related to the stage of life a person is in, for example, when a person has a family and settles drinking decreases substantially.

Responsibilities (see Appendix C.5 for 8.4.3.3): Responsibilities, which would intervene with the behaviour, were work, university work and exams. Participants cited that not wanting to embarrass oneself was about being responsible over actions and being able to control oneself. Feeling responsible for one's own health was cited. Several participants mentioned the importance of not drinking and driving.

Information/ knowledge (see Appendix C.5 for 8.4.3.4): As the knowledge about units concerned participants did not have clear idea about units of alcohol. It was cited that information is usually received through social media, posters, fliers, promotional messages. Health messages get ignored as it is long term effect of alcohol. For example, liver damage it is not something people develop over short period of time. At the same time most students seem to ignore posters as they do not seem to think that they personally consume excessively to be taking this information in.

Future self/ role model for children (see Appendix C.5 for 8.4.3.5): Thinking of future self and becoming a parent thus role model for children were mentioned by several participants. Parenthood and alcohol use did not seem to be anyhow related (Rúdólfsdóttir & Morgan, 2009).

Self/ self-image (see Appendix C.5 for 8.4.3.6): Students were concerned about the image they present of themselves while drunk as they would not like to be doing stupid things in front of others. P-18 mentioned about him accepting his addictive self/personality which helped him to "channel" his addictive self to something positive

e.g., he used it to learn new skills which gave him confidence and helped to overcome his addiction.

Perception of prototype of a drinker or non-drinker (see Appendix C.5 for 8.4.3.7): Participants had some ideas of drinkers and non-drinkers. Some of them thought to be similar to drinker and non-drinker as they are friends. Both positive and negative description was given to drinkers and non-drinker. Drinkers were seen to have fun character, to be sociable and friendly. Negative connotations were: low self-esteem, loud, misbehaviour. Nondrinkers were seen to be "sensible", "they do not fall under the pressure" and "bored" and "cannot enjoy the party". Definitions and comparisons are in line with prototype willingness model which assumes having positive image of a drinker would add to behaviour formation (Gibbons & Gerard, 1995, 1997; Rivis et al., 2011).

Motivation to stay within safe limits (see Appendix C.5 for 8.4.3.8): Motivation to stay within safe limits was to avoid embarrassment in front of friends and shame. Also it was cited that participants would not want to drink a lot to avoid accidents and for health reasons. Motivation behind alcohol use being shame, to avoid negative consequences and health reasons can be explained by introjected regulation, external regulation and identified regulation respectively (Ryan & Deci, 2000).

Negative life events (see Appendix C.5 for 8.4.3.9): It seems that negative events either those happened with the students or their loved ones or with someone at university which happened in the past work as a warning or a block to prevent excessive drinking as they would not want to experience the similar event. P-18 mentioned until people "hit the rock bottom" they would be in denial. He added "negative events would affect people the way to form their coping with difficulties in life". There is a connection of negative events being related to form coping mechanism in people. P-18

reported that acceptance of the problem would make it easier to address the issue. If the person is in denial, not much can be done. Previous research showed that as long as alcohol use is meeting those social needs of the students no problem recognition would occur. This can be explained by self-regulation theory (SRT) (Agostinelli, Floyd, Grube, Woodall, & Miller, 2004). It is only if negative consequences come across while trying to meet social need and creates discrepancy, that's when the problem recognition happens (Capron & Schmidt, 2012).

Attitudes and beliefs (see Appendix C.5 for 8.4.3.10): P-18 mentioned that his attitude changed as he was an addict and he was not someone who would care about anything but alcohol or drugs, he had very low self-belief. Since he started being interested in what he is doing and found out that he is good at it, his self-belief increased thus his life changed. Alcohol is believed to manage boredom and increase enjoyment. P-2 and P-17 believed getting rid of alcohol would "save lives". Some believed having control is good as person can become burden when drunk at the end of the night and "can ruin the evening". Some believed there are things except alcohol which can be enjoyed e.g., "work", "talking to friends" and "video games" (P-3, P-6). Being religious and older was more about drinking less. Alcohol believed to be drunk for different reasons (P-6). When one of the students believed alcohol "damages his brain" (P-12) another mentioned that it does not have straight interference to his health (P-1). P-3 had a year in employment before coming to university, which made her realise there, is no need to be drinking as she enjoyed her work and still does. P-19 believed drinking during the meal is less harm to body and mentioned that mood has a big role to play during drinking session. P-23 believed alcohol has control over people. Positive attitude about alcohol and beliefs (e.g., injunctive norms-belief that significant other would approve alcohol use behaviour) predict intention to drink and it is, and they

have shown to be significant contributors of intention (Conner, Warren, Close, & Sparks, 1999; Gibbons & Gerrard, 1995; Gibbons, Gerrard, Blanton, & Russlle, 1998).

Expectations (person's) (see Appendix C.5 for 8.4.3.11): People had expectations of having alcohol whichever social gathering they went (P-19, P-20, P-21, P-22, P-23).

Intentions (see Appendix C.5 for 8.4.3.12): Majority of students reported about forming intention to drink prior to the drinking session or sometimes it happens spontaneously. Spontaneity is worded to be "willingness" which in most previous research contributed to "intention", separate variable (Ajzen, 2011).

Knowing one's limits (see Appendix C.5 for 8.4.3.13): Students identified they had enough to drink by the certain cues they had e.g., becoming clumsy (P-20) or until they get to the certain degree of drunkenness. Some students seem to set a limit some drink to get drunk. Knowing one's limits did not necessarily mean sensible drinking. The number of drinks participant were reporting varied. Research by Orford et al. (2004) noted that definition of a few drinks varied from 1-2 drinks to 5-6 drinks depending if the person was a light or a heavy drinker.

Finances (see Appendix C.5 for 8.4.3.14): Alcohol was cited to be a cheap release. Lack of finances was also predicted alcohol use. The reason for drink in this case was to forget about troubles. Having money meant more parties. In regards to the financial resources, Hanson and Chen (2007) found that financial recourses of the family were associated with greater frequency and quantity of alcohol, drug use and cigarette smoking.

Willingness, strong will and will power (see Appendix C.5 for 8.4.3.15): Majority of participants mentioned they would accept drink when offered. Some would not (P-5, P-15). Willingness to accept would be dependent on the person who is

offering, as participant were aware that they could be spiked. Having a strong will seems to predict student's ability to say no.

Economy (see Appendix C.5 for 8.4.3.16): Current economy seems to be effecting the price of alcohol (P-2).

Boredom (see Appendix C.5 for 8.4.3.17): For most of the students, boredom was related to more alcohol use. Only P-13 mentioned when bored he would not drink much. Alcohol is used for coping with boredom.

Perceived difficulty or ease to drink (see Appendix C.5 for 8.4.3.18): Having favourite drink made it easier for the students to drink. People do not find it easy to drink their first couple of drink. They cited that after the tolerance is built it makes easier to drink more.

Coping strategies (see Appendix C.5 for 8.4.3.19): Social support seeking, praying, avoidance coping, reevaluation, concentrating on problem solving were mentioned by participants. The problems mentioned were study pressures, financial problems, relationship issues. P-18 mentioned alcohol served to cope with both positive and negative emotions.

Personal decision (see Appendix C.5 for 8.4.3.20): Drinking was seen to be a personal choice. P-18 stated being addicted "the only person that can help them is themselves" and highlighted the importance of acceptance and making that decision to change.

Person's state (see Appendix C.5 for 8.4.3.21): States of the person seems to be intervening with their drinking pattern. Being conscious of the job expectations, going through hard time and being sad or nervous, fear of parents of finding out about the behaviour, being tired, the mood and being bored seems to determine the behaviour.

Enjoyment of the effect (see Appendix C.5 for 8.4.3.22): Not many people seem to like the taste of alcohol only after the tolerance is built by drinking several drinks, but the effect it has on them

Lack of time (see Appendix C.5 for 8.4.3.23): Students who are busy or who has demanding jobs generally seem to drink less. Lack of time is related to the responsibilities they have.

Understanding one's personality and body (see Appendix C.5 for 8.4.3.24): If person understands his personality and body it seems easier not to get involved in harmful behaviours, for example knowing how much alcohol person's body can take or being aware that person is impulsive.

Policy (see Appendix C.5 for 8.4.3.25): The policies seem to be encouraging the behaviour e.g., legal drinking age. Some policies restrict the behavior performance e.g., serving alcohol in the bars, student halls of residence internal policies and procedures, and drinking and driving. Larsen, Smorawski, Kragbak, & Stock (2016) argue introducing policies, which would restrict consumption in campus, would not be enough as in line with university culture; culture of drinking generally should change for it to be affecting drinking habits of students.

Accessibility (see Appendix C.5 for 8.4.3.26): Accessibility factor was defined to be living in student halls of residence, cheap drinks in student nightclub, being 18, being invited to parties, having finances, living in the town where all bars are located. Whereas being under 18 and living in a remote area made it difficult to involve in drinking.

Acceptance (see Appendix C.5 for 8.4.3.27): Ability to recognise one drink excessively and accepting the problem seems to be a positive factor as a person will be trying to tackle the problem he might face.

Denial (see Appendix C.5 for 8.4.3.28): Denial as one of the participants mentioned it could lead to an addiction and dependence.

Personality (see Appendix C.5 for 8.4.3.29): The way people are; their personality also seems to be a factor. P-2 mentioned that it did not matter where or who you are with, you would be doing different things than people around you and P-18 mentioned about his additive personality. People are different even in relation to effect they get from alcohol (P-14). Understanding one's own personality and acceptance of oneself is the key especially while trying to come out of addiction or accepting person is drinking excessively. Research by Sobell, Cunnigham, & Sobell (1996) shows information of alcohol recovery is possible without professional help. Orford et al. (2006) also suggest that mostly "change process is self-directed" (p. 101) Certain characteristics of personality for example, being able to speak up and standing up for oneself when it comes to drinking would help in reducing consumption.

Addiction (see Appendix C.5 for 8.4.3.30): Physical and mental addiction was cited by a participant and that it effects person's choice and leads to excessive use if s/he does not realise he has it.

Contextual conditions

Family, friends, colleagues/familiarity of people and their expectations (see Appendix C.5 for 8.4.4.1): Atmosphere seems to be created by the people and the familiarity of people e.g., a person drink more with friends than with family. Being with friends created more opportunities to drink and let sometimes friends pressurising. Having girlfriend meant drinking less. Drinking alone was not encouraged but couple of students "were lonely drinkers" (P-2). Peer pressure emerged in study by Orford et al. (2004), also it was reported that heavy drinkers were more inclined to be persuaded to drink more by the people who are important to them, in quantitative studies it has been

marked as injunctive norms (Borsary & Carey, 2003). Social modeling and influences were shown to be moderated by alcohol expectancies (Wood, Read, Palfai, & Stevenson, 2001).

Location/activity/duration of a drinking session (see Appendix C.5 for 8.4.4.2): Any celebration was related to alcohol. Accordingly, where people are the amount of alcohol consumed was different e.g., in the restaurant would be less than in the bar or a party. Having friends nearby made it easier to drink.

Number of people (see Appendix C.5 for 8.4.4.3): Number of people involved in drinking session defined the quantity e.g., less people is "shallow". The amount consumed, in previous study showed to be dependent on the size of the group (Cutler & Storm, 1975).

Mood (see Appendix C.5 for 8.4.4.4): Most students reported good mood led to more consumption. If the person is with close people it meant good mood, so there is relation between mood and people around.

Enjoyment of occasion (see Appendix C.5 for 8.4.4.5)*:* Enjoyment of company, music and alcohol was positively related to consumption.

Availability of drink/favourite drink (see Appendix C.5 for 8.4.4.6): This factor facilitated drinking (P-3, P-11, P-21, P-23).

Year of study (see Appendix C.5 for 8.4.4.7): Being first year student meant involvement in sports group and more alcohol use, also it is the age when people can drink legally. Third year was about work and dissertation, more responsibilities led to less consumption.

Other people's drinking behaviour (see Appendix C.5 for 8.4.4.8): People seem to drink similar amount like people around them (P-2, P-3, P-5).

The way of being (see Appendix C.5 for 8.4.4.9): Drinking is seen as a part of culture. It is a part of university culture too. Alcohol is catered for everything at university (P-2). A young student drinking is in a way a norm. Mature students do not drink as much. Sports groups are associated with excessive alcohol use. In British culture it is socially acceptable to drink.

Drinking alone (see Appendix C.5 for 8.4.4.10): Drinking alone was seen as inappropriate. P-10 mentioned drinking alone when he broke up with his girlfriend. The behaviour was seen as not acceptable by most of the students. Study by Larsen et al. (2016) reported that drinking alone, losing control and putting oneself at risk and losing study capabilities is seen to be unacceptable behaviour.

Religion (see Appendix C.5 for 8.4.4.11): Being religious was stated to be drinking less and no drinking for coping purposes.

Culture (see Appendix C.5 for 8.4.4.12): Culture of sports groups, different ethnic culture and fresher's culture were mentioned. Previous research confirmed that high level of alcohol consumption did not only occur at universities but also outside, though alcohol use is a customary activity for students to be involving (Larsen et al., 2016).

Environment (see Appendix C.5 for 8.4.4.13): P-18 spoke about the being brought up in a certain environment influences his choices.

Communicating messages and effect of social media (see Appendix C.5 for 8.4.4.14): Alcohol was reported to be glamorised within social media to catch attention as if it is something "glamorous" (P-2) to be doing. Students tend to follow the message which applies to them or they can relate to (e.g., advert about drinking and driving). Health messages seem to have no attention from them as it is not something to happen immediately after consumption e.g., liver failure. And according to the majority

of students messages seem not to apply to them and it did not matter if they drink excessively or not. Although one of the students mentioned adverts making her conscious about the behaviour and its consequences, messages sent around the university were seen to be promoting alcohol and the events e.g. fresher's week is organised "around alcohol" not "music". Two students agreed on not encouraging students to drink at the university. Promotion messages both onsite and offsite were associated with heavy alcohol use in campus (Kuo, Wechsler, Greenberg, & Lee, 2003).

Experimenting (see Appendix C.5 for 8.4.4.15): Experimenting emerged as a theme, which is a reason student, would try drinks when they are in a new country or new to university (P-11, P-12). Sheehan and Ridge (2001) mentioned about experimentation with alcohol and any other substances to be a part of growing up.

Consequences

Avoiding negative consequences (see Appendix C.5 for 8.4.5.1): Getting sick, losing belongings, health concern, hangover, ending up in a hospital, criminal damage, losing control memory problems, suicidal thoughts, physical addiction seem to be the consequences to be avoided.

Drinking to cope (see Appendix C.5 for 8.4.5.2): Alcohol was used when facing difficulties e.g., break up, study pressure, losses, and to cope with meeting new people when joining the university. P-18 mentioned he used alcohol for both coping with negative and positive emotions. Cooper, Russell and George (1988) wrote that individuals who drink to cope are more likely to abuse alcohol. Cooper et al. (1995) found that people drink for different reasons and they divided them to "enhancement" and "coping" drinkers. The research suggested that people drink for enhancement and coping reasons, sometimes the same person can be drinking for both reasons. The authors question drinking being the unitary phenomenon and suggest that it would be

beneficial to target drinkers who drink for enhancement reasons and drinkers who drink for coping with negative emotions differently.

Staying safe techniques (see Appendix C.5 for 8.4.5.3): Techniques students used: giving time for body to recover from alcohol, drink water in between alcoholic drinks, eating before drinking, keep safe by not drinking at all, not drinking when driving, keeping with the people they know and trust, drinking indoors, not mixing drinks, by not drinking when tired. The theme of "harm minimization" explained techniques used to minimise harm by Van Wersch and Walker (2009). For example, not mixing drinks, drinking water etc. (Van Wersch & Walker, 2009).

Change (see Appendix C.5 for 8.4.5.4): Starting to practising religion was cited to be a factor of change of drinking habits. Accessibility seems to closely connected to change. Starting university where drinking is a part of university life, moving from village to town where more opportunities to go out seems to be predictors of change. Understanding own personality, as one of the students was previously addicted to drugs and alcohol, helped to channel his addiction to gaining knowledge. Previous research highlighted the importance of persons own determination to be a most influential factor of change (Orford et al., 2006).

Research question 1

R1 What are the contextual factors which contribute to students' alcohol use?

Contextual factors showed to be family, friends, colleagues/familiarity of people and their expectations; location/activity/duration of a drinking session; number of people; mood, enjoyment of occasion and availability of drink/favourite drink. In addition accessibility; year of study; other people's drinking behaviour; the way of being; drinking alone; religion; culture; environment, communicating messages and

effect of social media; experimenting showed to be defining the amount and the variety of habits students apply under each context.

Research questions 2

R2 Where do the social cognitive theories fit into the matrix of alcohol use among university students?

Social cognitive theory components fit into the matrix under the intervening conditions, it can be said that existence of particular beliefs, attitudes, intentions, willingness, strong will and will power, perceived difficulty and ease to drink and the way drinker or non-drinker is perceived by the participant is intervening condition.

8.6 Summary of the Chapter

Chapter 8 reports the results of Phase III of mixed method research. The aim of the chapter was to explore further the components targeted in quantitative part and provide explanation from qualitative perspective. Chapter 8 presented methodology used for Phase III – interviews. The findings are reported in Section 8.4 in which categories of action/interaction, causal conditions, intervening conditions, contextual conditions and consequences are presented with the themes emerged under those categories.

Chapter Nine: Qualitative Analysis of Focus Group Data

9.1 Introduction

This chapter presents the methods and the results of Phase IV of mixed method study in which students' alcohol use from perspectives of university staff was investigated. Focus groups were organised in order to explore the overall alcohol context at the university. Types of motivations, students' attitudes, beliefs, perceived behavioural control, subjective norm and the effect of prototypes on students was investigated from the viewpoint of university staff. In addition, the alcohol policies and procedures, quality of communication between departments, and with students (Barry & Goodson, 2011), the support needed for staff to assist in establishing communication in order to initiate a positive change, experiences of staff in relation to students' alcohol consumption were discussed. Study by Snow et al. (2003) was used to inform the focus groups. Themes were defined and current knowledge, beliefs and practices were explored. Focus groups assisted in exploring the alcohol context in order to create a more comprehensive picture of the behaviour at the setting. Framework analysis procedures were adopted for data analysis (Richie, Lewis, & Nicholls, 2013). The chapter consists of several sections. Section 9.2 gives an overview of the literature conducted on exploration of alcohol use with university staff. The chapter also sets out the aims and objectives for the focus groups and the research questions generated for the study. Section 9.3 describes the methodology. Section 9.4 reports the findings of this qualitative part. Section 9.5 covers discussion and finally Section 9.6 provides a summary of the chapter.

9.1.1 Aims and objectives.

9.1.1.1 Aim of phase IV:

Explore experiences of members of staff of student support services to gain an insight into students' experiences of alcohol use and identify micro and macro level factors influencing the behaviour.

9.1.1.2 Objectives of phase IV:

To conduct focus groups with university key personal to gain further insight into drinking behaviour at the university

To explore further personal, micro and macro level factors influencing students' alcohol use

To draw conclusions on appropriate interventions for the University students based on the literature review, interviews and focus groups

To organise data and identify themes which would address specific research questions of focus groups

9.1.2 Research questions.

RQ 1 What are the contextual factors which contribute to students' alcohol use?

RQ 2 Where do the components of social cognitive theories fit into the matrix of alcohol use?

Specific research questions

What are the policies and procedures within university regards alcohol?

What is the current practice and what are the interventions?

What are the challenges to enforce alcohol policies?

How does the university promote sensible drinking?

What are the beliefs and knowledge about students' substance use?

What are the student safety concerns?

What communication improvements could be made between departments and the university to support both staff and students?

What are the action and policies suggested?

9.2 Methods

9.2.1 Setting. Focus groups have been organised in the University of Bedfordshire, Luton

9.2.2 Fieldwork preparation. During the data collection for the quantitative part of the research, departments within the university were contacted and informed about the research being taken place.

9.2.3 Sampling methods. Focus groups have adopted purposive sampling. The sampling is widely used in mixed methods research mostly to generate narrative data (Teddie & Tashakkori, 2009). In order to generate a sample, which will assist in answering research

questions, a shortlist of the departments, which provides student support, was drawn up. It was decided to invite members of staff from different departments in each focus group to gain both sufficient depth and breath.

It was aimed to select larger unit of the population of interest. Inclusion criteria for the participant, was to have not less than a year's experience within the university.

Saturation for the focus groups can be reached by collection of data with 3 or 4 focus groups (Krueger & Casey, 2000). In the current complementary study, only 2 focus groups have been organised (Teddlie & Tashakkori, 2009). Phase IV focus groups were organised starting from June 2015 onwards that comprised of the staff of student support services, careers advice, wellbeing team, student union and bar managers.

9.2.4 Data collection.

9.2.4.1 Focus group process.

9.2.4.1.1 Procedure. The university key personal was contacted by email or approached at the university premises and were informed about the research being taken place during the Phase I of the research. During June 2015 the participants of wellbeing team, bar/ nightclub staff, halls of residence, carrier department and student union were invited to the focus groups both personally and by sending invitations, which included the information about the research and the topics to be covered (see invitation letter in Appendix E.1). The participants who were interested in the questions were provided with questioning route before the focus groups took place. The researcher carried out a briefing about the research. The participants were asked to complete 2 consent forms prior to the focus groups in case they are willing to participate in the study (see Appendix E.2). The university staff was informed about their rights to withdraw or withdraw their data from the research at any time (BPS, 2010; 2011). The consent form included information about the research, contact numbers of national helplines, NHS and information about occupational health referral at the university (see Appendix E3) (BPS, 2011). Members of staff, who were interested in receiving research findings

summary, would be able to contact the Psychology department of the university. The current research is focus groups study and a part of 4-phase research.

Focus groups started with asking participants by eliciting alcohol consumption at the university and then move on to semi-structured questions. Focus groups took approximately 1 to 2 hours (Krueger & Casey, 2000). The researcher was moderating the process and consent was given by the participants for the focus groups to be recorded.

The focus group verbatim was transcribed with the use of NVivo and analysed manually. Framework analysis was applied, as it is one of the methods, which was successfully used within content analysis and very flexible approach. It allowed analysing data in an inductive or deductive fashion (Gale et al., 2013). The data was analysed in a deductive way for the purpose of the current study. A second researcher was involved in double checking for the themes as well as for the accuracy of transcripts. Nearly all codes and themes were accurate. The findings were used to draw up recommendations of the components to be targeted for interventions for university students and it will be disseminated among university key personnel. The participation in the focus groups was voluntary.

No personal details of participants were requested except for their role at the university; thus anonymity was maintained. No links between participants' role and transcripts for focus groups were drawn. Tapes of focus groups and consent forms were kept in locked storage within the Psychology department, thus ensuring confidentiality. In the case of participants' withdrawal from the research, their personal data would be destroyed (i.e. consent forms, comments) (BPS, 2011).

The one risk, which might have occurred during focus groups, was distress. In such circumstances, participants could contact national helplines, NHS or their local GP

to seek help. If there was any concern about participants' health they would be provided occupational health referral. There was no adverse effect with regard to the researcher (BPS, 2009; 2010).

It is the researcher's responsibility to conduct research in a sensitive way, according to the Code of Conduct by the British Psychological Society (2009). The researcher analysed the data collected, and conducted focus groups in sensitive manner. Also, the researcher was sensitive towards age, gender, culture, ethnicity, religion and the race of participants.

9.2.4.1.2 Design. Focus groups were organised. The participants, staff of university support services, wellbeing team, career advice, student union and bar manager were selected by purposive sampling for focus groups (Teddlie & Tashakkori, 2009; Teddlie & Yu, 2007).

9.2.4.1.3 Material

a) Invitation for focus group participants (see Appendix E.1)

b) Consent form (see Appendix E.3)

c) Questioning route for focus groups (see Appendix E.2)

9.2.4.2 Pilot focus groups. Pilot focus group was conducted with PhD. students. The aim was to check the data to be generated by the questioning route, the time required and to receive feedback if any changes need to be made.

9.2.5 Data analysis. Study by Snow et al. (2003) was used to inform focus groups. Focus groups study will assist in finding additional determinants of alcohol consumption within student population based on views and current practice of university staff. The framework analysis was adopted to analyse qualitative data. Framework analysis was applied, as it will allow looking for additional determinants and using inductive approach. At the same time, it will match the theories used in Phase

I, II and III of research using deductive approach (Gale et al., 2013) if any relationship is found.

Analysis was done in several phases to enable to check for saturation. The codes emerged, from descriptive to analytical. During the analysis the researcher and the second researcher, who was assisting during the research, agreed on the codes (Krueger & Casey, 2000). The audiotapes of focus group verbatim were transcribed. The second researcher checked the transcript for accuracy. The audio tracks were entered to NVivo, a data management software package, to be transcribed. The data was analysed manually. Thus alcohol context within university was explored.

9.2.5.1 Familiarisation. Familiarisation is described to be a process of "immersion in a raw data" (Pope et al., 2000, p 116). Familiarisation was achieved by conducting focus groups, listening to the recording while transcribing the focus groups verbatim and double-checking for the accuracy of the transcript. During the familiarisation researcher has initial ideas about recurrent themes (Pope et al., 2000). The researcher was listening through the recoding after pilot focus groups and the half way of collecting focus groups data. In addition, the notes made during the focus groups were studied. As it was described by Richie and Spencer (2002), familiarisation is the main stage when researcher gains feel for the data. The notes were made about the general atmosphere of the focus groups (Richie & Spencer, 2002).

9.2.5.2 Coding. The transcripts were coded. During coding, the left hand margins were used to write down the codes and labels (see Figure 8.1). Sometimes there was a single code used, in other cases labels for coding, which would help to remind the meaning and the purpose of the word, phrase, the sentence or even several sentences in the transcript. Any ideas during coding were written down on the right hand margins. Any additional questions to be asked during following interviews and clarification of

some ideas were recorded as well. The messages, which were repeated by participants showed to be important for them, were noted. The notes of meanings of codes and ideas were taken. During coding the variables which were explored were written down on the right margin as the analysis of the interviews was based on deductive analysis of qualitative data which is increasing in qualitative research, especially within framework approach (Pope et al., 2000).

9.2.5.3 Identifying a thematic framework. The aim of this stage is about identifying key issues and concepts. Later, based on those concepts, a thematic framework is developed and it is used for data examination (Pope et al., 2000). The data is organised in relation to research aims and objectives, and the points mentioned by the respondents. The ideas, themes, views that reoccur in the data are noted on this stage (Pope et al., 2000) (see thematic map in Table 9.1).

Table 9.1
Thematic Map for Focus Groups

Code	Description
Action/ interaction	
Positive effect on health, body and self	Any positive effect reported in relation to health, body and self
Negative effect on health, body and self	Any negative effect reported in relation to health, body and self
Causal conditions	
Positive alcohol expectancies	Any positive expectations in relation to alcohol
Negative alcohol expectancies	Any negative expectations in relation to alcohol
Escapism	Drinking to escape from difficult situation
Intervening conditions	
Accessibility	Any age related information reported and how it is linked to alcohol use

Finances	Information about change or circumstances in life in relation to work, study and family and how it has effected alcohol use
Boredom	Work, study, family any other responsibilities reported
Policies and procedures	Alcohol related policies used in the setting
Self	Information about future self
Spare time	Students' use of spare time
Rite of passage	Perception of prototype of drinker, non-drinker, any similarities and differences in character or behaviour participants mention
Belief	Beliefs participants hold in relation to students drinking and their abilities to support students
Attitude	Effect of negative event to person's alcohol use
Identity	Attitudes in relation to drinking
Job/ responsibility	Beliefs which participants hold in relation to drinking
Perception of a drinker non drinker	Students' perception of a drinker and non-drinker from staff's perspective
Negative life events	Negative events in relation to alcohol use
Person's expectations	People's expectations
Knowledge	Knowledge about students' substance use
Intention	Information about students' intention to drink
Contextual conditions	
Economy	Pattern in alcohol use while with family, friends and colleagues
Course at university	Location, activity and length of drinking and its role in consumption
Culture	Number of people involved in drinking sessions and its effect on personal drinking

Location/ place	Mood during drinking sessions
People (their expectations) and organisations involved	Enjoyment of drinking session
Enjoyment or celebrating the occasion	Availability of drinks and how it is related to consumption.
Drinking alone	Drinking alone/ reasons/ concerns
Communication	Communication between university staff students colleagues departments and organisations
Consequences	
Avoiding negative consequences	The facts mentioned to avoid as a consequence of drinking/binge drinking
Negative consequences	Negative consequences alcohol causes
Drinking to cope	Information in relation to drinking to cope

The table 9.2 below is the thematic map which was put together in order to address the specific research questions of focus groups study. The questions are addressed in chapter 11 (see Appendix D.4 for a complete table).

Table 9.2
Additional Thematic Map for Focus Group Data (specific research questions)

Code	Description
People and organisations involved	
Frontline people	Frontline people who needs to deal with students alcohol use
Departments	Departments are responsible for students wellbeing
Local organisations	Local organisations involved

9.2.5.4 Indexing. After thematic framework has been identified indexing is performed with the use of focus group transcripts and the prior identified index which is numbered and has textual identification. Sometimes the passages assigned for one particular index had another index within. In those cases, multiple indexing has been used and referenced (Ritchie & Spencer, 2002). While indexing the data new themes have emerged (see Figure 8.5).

9.2.5.5 Charting. After a thematic framework has been applied to the transcripts, charting was arranged in which the experiences, attitudes and views are "lifted" from their initial context and organised in a way to fit the thematic references (Richie & Spencer, 2002, p. 19). Each chart was organised under key subject area and the themes related to it. Charts had each participant's responses on a particular area, which allows drawing comparisons between and within cases (Ritchie & Spencer, 2002). While charting it was possible to see the several factors, which contribute to drinking behaviour. Charting also allowed to see things from different angles.

9.2.5.6 Mapping and interpretation. Mapping and interpretation about creating charts and explaining the phenomenon by finding the links and associations between the themes and subthemes emerged during the study, the process is influenced by objectives of the study (Pope et al., 2000).

9.2.6 Methodological quality.

Methodological quality, Credibility was achieved by being involved in the setting, by meeting the members of staff of student support services and informing them about the research taking place, by involving the departments to recruit students and advertise the research assisted in getting support on a later date, support for focus

groups. Discussions also took place with members of staff about their observations. Throughout the research process, the opinions of the peer researchers were considered.

The accuracy of the transcripts was checked by another researcher who double checked the transcript listening to the audios (Lincoln & Guba, 1985). Most of the transcribed text was accurate.

Transferability was achieved by drawing links between student views and views of members of staff with regard to students' alcohol use. Dependability was ensured by seeking a feedback on the accuracy of the data and its interpretation from a fellow researcher (Lincoln & Guba, 1985).

Conformability audit was achieved by involving another researcher and seek for feedback on analysis and how well it fits the data. The chapter describes each step taken for the analysis of focus groups data thus addressing audit trial. Triangulation was not addressed but links were drawn to complement findings of interview results and focus group results. A diary was kept in order to address reflexivity; in addition, other researchers were advised in analysis of data (Lincoln & Guba, 1985).

9.2.7 Ethical consideration. The research was conducted according to The Code of Ethics and Conduct by British Psychological Society. Thus, participants were briefed about all the aspects of the research prior to the study, and if there were any questions in regards to the research they were answered. Participation was on voluntary basis. The participants were informed that data collected would be kept confidential and anonymity would be maintained. The anonymity was achieved by using pseudonyms and by deleting any personal information and replacing it with different words (e.g., names of the places). The consent form was asked to complete prior to the participation. The consent form included the information about the research, and the procedures to follow if research causes any distress. The participants were also informed about their

right to withdraw at any stage of the study. In case of the withdrawal of participants all the data of theirs would be destroyed e.g., consent forms and participants' comments. There were many members of the staff with different ethnic backgrounds at the university. The research was conducted in a sensitive way considering values in their culture (BPS, 2009; 2011). In addition to before mentioned, the participants were asked for a consent to record focus groups.

There was not any benefit in participating in the current study. Distress might have occurred during focus groups. The participants were provided with numbers of national helplines and NHS to seek help in case of distress. Also, they were informed about contacting their local GP. In the situations when the managers are concerned about member of staff's health, they can contact HR to be advised on occupational health referral. If the referral is appropriate, it would be organised either via phone or face to face with Occupational Health Advisor in Luton and Dunstable University Hospital Occupational Health Department. The information about national helplines, NHS and occupational health referral were made available on a consent form.

9.3 Focus Group Participants

The university key personal was recruited for the focus groups: student support services, well-being team, student union, career advice and bar managers at the university. After ethics committee of the University of Bedfordshire approved the research, the members of staff of that university were either approached at university premises or else by phone. They were briefed and participants were identified and recruited.

Focus groups (Phase IV) participants will be university staff: student support services, well-being team, career advice, student union and bar managers at the

university. Two focus groups were organised with 5 participants altogether. The participants for focus groups were selected on purposeful sampling (Teddlie & Tashakkori, 2009; Teddlie & Yu, 2007). The management structure of the university was used to help involve members of staff who are directly involved in the students' well-being and life at university. They were approached before the focus groups and were familiarised with the aims of the research; consent was received at the beginning of focus groups.

Homogeneity will be achieved by selecting the participants who work for the university; at the same time the participants for focus groups will be from different departments, generating more information and ideas (Krueger & Casey, 2000). The members of staff who worked for less than one year at university setting were not invited to the focus groups.

9.4 Findings

Themes emerged after analysis of focus group data with members of staff are presented below and described under the following categories.

- Action/ interaction
- Causal conditions
- Intervening conditions
- Contextual conditions
- Consequences

9.4.1 Action/ interaction.

9.4.1.1 Positive effect on health, body and self. Members of staff at the university expressed their views on the effect of alcohol on students. P-3 mentioned about alcohol to be a confidence builder “Lacking confidence is motivation to drink”,

(P-3). She also mentioned that alcohol serves a significant role in building self-esteem with girls "… about the self-esteem especially with girls I have heard so many times I look in the mirror oh you look fine oh you look ugly, well I get drunk and I will look beautiful", (P-3). P-7 also confirmed alcohol is about confidence drink provides "in order to have this confident feeling to make friends, to talk to somebody and not be somebody in the corner, when they drink they feel brave, … they drink to have these feelings, and they want to fit in, not be on their own", (P-7). P-4 said for male students "and with males it I am macho thing you know" everybody in the focus groups showed the gestures of agreeing with him. He added that drinking among the male students become very "competitive" as they want to show how much more they can take.

9.4.1.2 Negative effect on health, body and self. P-1 gave example of the experience she had with students who excessively used alcohol and what effect it had on their jobs saying "it makes people unreliable and then when they are not reliable we are all guilty. Those who go out in the evening do turn up a little bit late". P-4 added the negative effect of alcohol has been observed within university" there were number of students who had depression type symptoms as a result of overindulging".

9.4.2 Causal conditions.

9.4.2.1 Positive alcohol expectancies (cannabis). Participants talked about expectancies by giving examples from their own experiences of being a student as well as their observations of students. Interestingly expectancy seem to be being relaxed and having that confidence to approach someone to have a conversation with and make friends. In addition, to overcome this nervousness of meeting new people P-4 said the following "There are a lot of people, you can see it. We have done a lot of events-you can see when people are really nervous or if they are on their own and they have not

made friends yet, you got lot more filling up faster, to feel more integrated". P-7 mentioned that start of the university can be the time for students for a "fresh start" they would like "to fit in" and "to be the cool guy". The consequences are not the best as "they end up with more alcohol in their blood so they start doing stupid things in order to show off". In addition, it is not only alcohol gives that boost of confidence students expect but some of them tend to use cannabis. Here is what P-7 noted: "It is (cannabis) to some. But yeah, I think it will relax, I think it helps you to relax, it will help you to boost your brain because when apparently you smoke". P-6 "… That wouldn't apply to everyone as some people can be aggressive. The idea that everyone is more cheerful and happy".

"Some people get depressed. More people go out to be cheerful and happy and that generally doesn't happen", (P-7)

When participants recalled them being a student and having a drink to be "friendlier and talking to people" (P-2), otherwise "I would be there and observe" (P-2). Couple of drinks gave her confidence to be "friends with everybody" (P-2). P-1 said: "I have done it myself. I was painfully shy. I was kind of person if you say something I start crying, I did seriously … over the years my confidence has built but during those times it was very easy to drink at home. You feel more confident, it settles you, it allows you to feel a little bit more you, take that worry out of you, and I think sometimes people who drink, they have worries. I have done this all this hard work … a lot of people will do that without eating so they will then go to a full blown excitement".

9.4.2.2 Negative alcohol expectancies. Alcohol was cited to have certain properties "That would not apply to everyone some people can be aggressive" (P-7). University staff is aware that substance use is leading to mental health issues (P-1, P-3,

P-4). Student village staff motioned about damage, verbal abuse towards the members of staff in student village (P-1).

9.4.2.3 Escapism. Alcohol seems to serve a purpose of escaping from worries: "You feel more confident and it settles you and it allows you to feel a little bit more. You take that worry out of you", (P-1)

9.4.3 Intervening conditions (see Appendix E.5)

9.4.4 Contextual conditions (see Appendix E.5)

9.4.5 Consequences (see Appendix E.5)

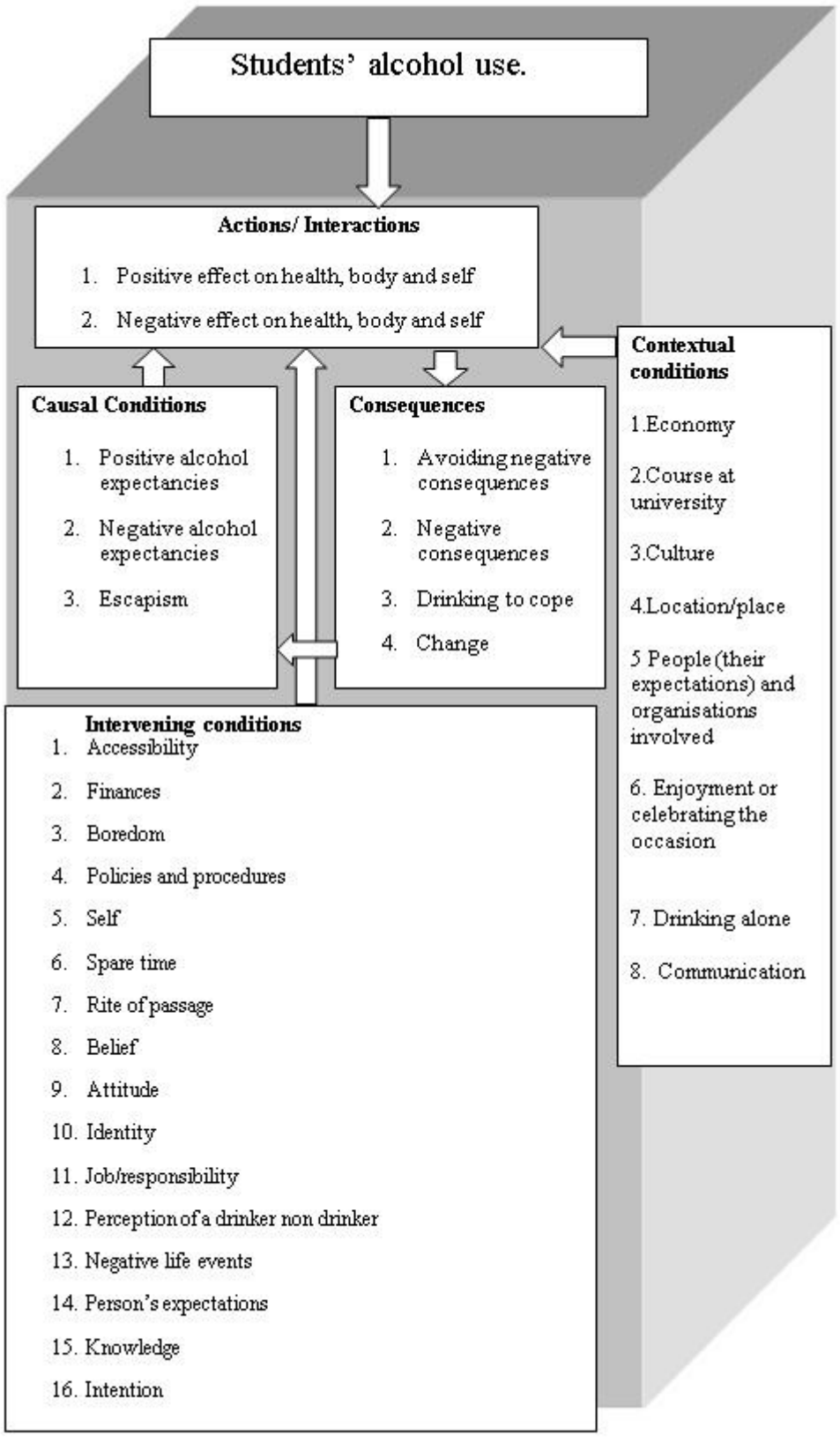

Figure 9.1. Conditional matrix for focus groups

9.5 Discussion

Focus groups analysis assisted in building conditional matrix of the students' alcohol use from the perspective of members of staff of student support services (Strauss & Corbin, 1998). The conditional matrix was applied by following Van Wersch and Walker's (2009) grounded theory application to explain drinking as cultural and social phenomenon.

H1: What are the contextual factors, which contribute to students' alcohol use?

The contextual factors were current economy, course at the university, culture, location and place, people and their expectations, other people's drinking behaviour, enjoyment or celebrating the occasion, drinking alone and communication.

H2: Where do the social cognitive theories fit into the matrix of alcohol use among university students?

Intention, attitude, beliefs are placed under intervening conditions.

H3: What are the additional factors, which is specific to the setting, contributes to students' alcohol habits and behaviour?

Additional factors emerged from focus groups were: people and departments involved, communication, policies and procedures and knowledge about students' alcohol use.

Figure 7 (see Figures 8.6 and 9.1) is the conditional matrix in which relation of causal, contextual and intervening conditions towards action/interaction is a changing dynamic process. The relation between action/interaction, consequences, and causal

conditions indicates the enhancement of the action interaction of binge drinking because of the positive meaning it has. Intervening conditions represent the factors which can affect action/interaction and the person who is thinking of binge drinking can either decide to binge drink or not, taking cultural habits, traditions and social norms out of his sight. The contextual conditions are a social environment which determines the occurrence of the behaviour process over time and place in various spontaneous situations (Strauss & Corbin, 1998).

The model which is built by conditional matrix produce an interplay of action/interaction, condition and consequences in three dimensional environments which is defined by time and space in which the behaviour occurs. The relation is not linear path as shown in the matrix but complex system of interaction (Strauss & Corbin, 1998). Under five headings action/interaction, causal conditions, intervening conditions, contextual conditions, consequences the following themes emerged.

Action/interaction

Action/interaction was defined by positive effect on health, body and self and negative effect on health, body and self. Action /interaction can change over time as person gives meaning to his life experiences (Strauss & Corbin, 1998).

Positive effect on health, body and self (see Appendix D.5 for 9.4.3.1). Positive effect was alcohol is "self-esteem builder" (P-3), helps to "fit in" (P-7). de Visser et al. (2015) reported one participant expressed importance of maximasing positive effect and minimising negative, have control and enjoy drinking.

Negative effect on health, body and self (see Appendix D.5 for 9.4.1.2). In relation to negative effect, "alcohol makes people unreliable" (P-1) and "there were number of students who had depression type symptoms as a result of overindulging" (P-

4). Being sick and losing control was embarrassing but sometimes people decide to "cross the line" and get drunk (Rúdólfsdóttir & Morgan, 2000, p. 499).

Causal conditions

Strauss and Corbin (1998) defined causal conditions to be the events that influence the behaviour. Positive alcohol expectancies, negative alcohol expectancies and escapism were identified during analysis.

Positive alcohol expectancies (see Appendix D.5 for 9.4.2.1). Positive alcohol expectancies were being relaxed and overcoming nervousness while making new friends and feeling more integrated (P-4) and "you are friends with everyone" (P-1). Rúdólfsdóttir and Morgan (2009) reported a theme of "loosening up" which helps in socialising (p. 502).

Negative alcohol expectancies (see Appendix D.5 for 9.4.2.2). Becoming aggressive (P-7) was mentioned as negative alcohol expectancies.

Escapism (see Appendix D.5 for 9.4.2.3). Escapism was one more theme emerged "you take that worry out of you" (P-1).

Intervening conditions

Intervening conditions change the impact of causal conditions on behavour (Strauss & Corbin, 1998). The examples of intervening conditions were accessibility, finances, boredom, policies and procedures, self, spare time, rite of passage, belief, attitude, identity, job/responsibility, perception of a drinker nondrinker, negative life events, person's expectations and knowledge about students' substance use.

Accessibility (see Appendix D.5 for 9.4.3.1). Accessibility was about having no parental interference (P-3), having cheap drinks in the area and in local bars (P-1) and shops (P-3, P-4). Kuo et al. (2003) reported excessive alcohol use due to accessibility factor.

Finances (see Appendix D.5 for 9.4.3.2). Having fewer finances was related to more indoor alcohol intake which usually leads to excessive consumption. In addition, having less money was related poor quality of life e.g., not being able to travel (P-2). Low cost alcohol was cause of overindulging (Kuo et al., 2003). Interesting findings were reported by Scott et al. (2014) "price driven customers" tend to drink cheapest and affordable and "context focused" customers drink the drink which will serve specific purpose, as participants of focus group reported the tendency to buy cheap drinks to get drunk.

Boredom (see Appendix D.5 for 9.4.3.3). Boredom was frequently mentioned by students who live in student residence, to be a reason to drink (P-1). Boredom was connected to spare time and accessibility (e.g., of alcohol or jobs in the area).

*Policies and procedures (*see Appendix D.5 for 9.4.3.4). A number of policies have been mentioned which were introduced in various settings within the university, for example the units to be served, the price of alcohol is monitored (P-2). Halls of residence follow a set of policies to follow to make sure students are looked after by monitoring the premises and implementing policies and procedures to keep students safe e.g., time to "switch of", informing the staff in advance if any parties (P-1). The staff also watches out for any drug use. Healthy behaviours can be achieved by implementing appropriate policies within macro system (Michie et al., 2014) Research by de Visser et al. (2015) also supports implementation of population level policies for young people.

*Self (*see Appendix D.5 for 9.4.3.5). Students were seen to do not want to find a job and work as they are "lazy" (P-3).

Spare time (see Appendix D.5 for 9.4.3.6). Spare time was related to having very few lectures in the university and not having jobs in the town.

Rite of passage (see Appendix D.5 for 9.4.3.7). Rite of passage emerged as being 18 years old is a transition period in students' lives.

*Beliefs (*see Appendix D.5 for 9.4.3.8). Bar and nightclub staff member held the following beliefs "even when you think about it and put things other than to get drunk, nobody comes" (P-2), or staff member from halls of residence mentioned "Yeah gets boring there should be things to do that is outside of drinking" (P-1). It is important to notice that the belief people possess can affect their work, as a member of student village gave a little more insight to his work saying that they are implementing policies which are outside of drinking, for example "pizza night" in which students socialise by watching the film together. "A lot of young people actually think that cannabis it is safer than smoking a cigarette" (P-6). P-3 mentioned "going out felt like an addiction". In study by Lear et al., (2014) underestimation the alcohol use was reported by lecturers. The importance of having accurate information about student alcohol use showed to be important as appropriate action can be taken to reduce excessive alcohol consumption among university students (Lear et al., 2014).

*Attitudes (*see Appendix D.5 for 9.4.3.9). Most of the members of staff agreed that the attitudes of students who lived in student halls of residence and private accommodation were different. The student halls of residence seemed to be a place to check the boundaries and the price of the accommodation being expensive is contributing to such attitude (P-1). Previous research showed that having positive attitude towards drinking is generally linked to intention to drink (Armitage & Conner, 2001).

Identity (see Appendix D.5 for 9.4.3.10). P-4 mentioned about having no defined identity for the students makes it difficult for them to know or identify what is expected from them and in a way it does affect to their life choices.

Job/responsibility (see Appendix D.5 for 9.4.3.11). Students with job and responsibilities are less likely to drink as it was reported.

Perception of a drinker or non-drinker (see Appendix D.5 for 9.4.3.12). Students who drink excessively are seen to be the ones who lack social skills. Male students drink to gain popularity and female students to feel more confident about them. Moderate drinkers are more socially accepted than abstainers (Trice & Beyer, 1977). Participants talked about the events which are making them realise the importance of implementing interventions.

Negative life event (see Appendix D.5 for 9.4.3.13). There were several occasions when students had to face difficulties as a result of their alcohol use. For example, one of the students was chased by a drug addict on the ways home and was nearly mugged, another student died on the street after staying in the cold too long. There were instances students could not carry on their course as their CRB would not clear, which was result inappropriate behaviour after excessive alcohol use.

Person's expectations (see Appendix D.5 for 9.4.3.14). Students are seen to be expecting alcohol to be a part of the parties organised in the university.

Knowledge (see Appendix D.5 for 9.4.3.15). Knowledge about students' substance use was more experienced in student halls of residence e.g., alcohol and drug use. "We have noticed that there are some instances when students have been drinking which leads to drugs and it has implication on mental health" (P-1). The knowledge assists in thinking and implementing appropriate policies or interventions to prevent incidents from happening e.g., from losing a career because of the CRB clearance, which was not cleared because of the incident, happened during the time at university (P-3).

Intention (see Appendix D.5 for 9.4.3.16). The theme of intention emerged and the participants (P-6, P-7) talked about students having sole intention to get drunk.

Contextual conditions

Contextual conditions create set of situations and circumstances, the person responds to them through action interaction (Strauss & Corbin, 1998). Economy, course at university, culture, location/place, people (their expectations) and organisations involved, enjoyment or celebrating the occasion, intention, drinking alone and communication were emerged as contextual conditions. These were the external factors or in other words social factors which creates various circumstances.

Economy (see Appendix D.5 for 9.4.4.1). Current economy effecting recent alcohol use, as students are not going out as much as before, or pre drinking culture is becoming common. Binging is increasing for the same purpose as drinking indoors is less expensive. Local clubs are closed as a result of economic situation in the country since recession in 2008, which is in effect changing the culture overall.

Course at university (see Appendix D.5 for 9.4.4.2). Each course at university seem to have its own culture in relation to alcohol. Sports teams are known to drink excessively and media students, whereas nurses do not as they are in work placements. Drinking pattern differed according to the group drinkers were in and social context Brierley-Jones et al. (2014).

Culture (see Appendix D.5 for 9.4.4.3). Culture was expressed in different ways. The following have been cited: drinking culture, which is engrained, cultural differences, drinking culture of northern and southern Europeans, culture of the group people belong to, culture change over last years, culture change in university over last 10 years. "I can remember supervisors encouraging meet and drink lunch time" (P-3) or "When I started international students were very small minority and it was a massive

drinking culture" (P-3) were reported. Drinking showed to be embedded in the culture, as the motives to drink differed in accordance to the culture in meta-analysis conducted (Baer, 1994).

Location and place (see Appendix D.5 for 9.4.4.4). Location seemed to be effecting, as it was said by the participant "do not see Luton great partying place" (P-4). The town seemed to be a place where alcohol can be purchased cheaply. Halls of residence seemed to provide safe environment for students. The location of student halls is central which keeps students safe. Student halls of residence seem to be a party place and a place to push the boundaries. Previous research confirms location predicts the amount consumed. For example, large quantities of wine were consumed at "home drinking habitus", in "traditional habitus" alcohol is consumed moderately (Brierley-Jones et al., 2014, p. 1063).

People (their expectations) organisations involved (see Appendix D.5 for 9.4.4.5). The theme signified "peer pressure" and "round system" seem to encourage people drink even more. Previous research showed, poor peer relationship predicted to be left in isolation and drinking to cope, whereas quality relationship predicted drinking to enjoy. Additionally, friend was encouraging to drink less (Borsary & Carey, 2006). In focus groups in the research conducted by de Visser et al. (2015) the participants, the teachers, suggested and wondered if young people would have skills not to feel pressure by others.

People and orgnisations involved were reported to be frontline people: lecturers, personal tutor halls of residence staff, library staff and department counselors, student union, head of departments. Individuals who are involved is Valerie Smith and Jenny who is counselor, Alison is from Student Union wellbeing team, managers in the nightclub and bar. Number of people within student village who are responsible are

village director, head of campus, security, night manager, on call manager. Organisations, which have duty of care are, SOS bus, police, night net radio, Luton safe network and local GPs.

Enjoyment or celebrating the occasion (see Appendix D.5 for 9.4.4.6). Enjoyment and celebrating the occasion emerged as a theme which highlighted the time within a year when students drink more than usual e.g., fresher's week, Christmas, beginning of the terms and the occasions when they enjoy drinking e.g., drinking games.

*Drinking alone (*see Appendix D.5 for 9.4.4.7). Drinking alone was cited to be predicting excessive alcohol use. There were instances reported when students had mental health issues as a result of excessive drinking alone in halls of residence.

Communication (see Appendix D.5 for 9.4.4.8). Communication had several subthemes like sources of information used to inform, sources of spreading the information, ways to identify students' alcohol use, ways to influence drinking behaviour, communication between colleagues, communication between departments, communication with students, effective communication.

Consequences

Consequences, whenever there is action/ interaction (or lack of it) taken in response to an issue or a problem or to manage or maintain a certain situation there are ranges of consequences some might be intended, and others not (Strauss & Corbin, 1998). Consequences were avoiding negative consequences, negative consequences and drinking to cope.

Avoiding negative consequences (see Appendix D.5 for 9.4.5.1). Avoiding negative consequences, necessary precautions were taken to avoid negative consequences while being in student nightclub where drinks were not served to students

who had enough or there was a limit in shots which can be served at ones, or bar staff always follow certain procedures to keep the students safe. In regards to the incidences happened with students as a result of alcohol, educational posters or leaflets seems to be distributed after the incident. In order to keep students informed there are local charities and organisations invited during induction week.

Negative consequences (see Appendix D.5 for 9.4.5.2). Negative consequences mentioned were spending money on alcohol and end up with no finances to pay for accommodation, though there were some contradicting ideas. Being late for appointments, losing a career because of the inappropriate behaviour affected student's CRB checks, aggressive behaviour towards student village staff and small number of criminal damage was reported as a result of alcohol use. Students' mental health seemed to be deteriorating over last 2 years. In addition, two more instances in which student was exposed to crime and second when a drunk student died as he was left in cold weather outside. Depression had a strong correlation with coping motives (Stewart & Devine, 2000; Windle &Windle, 1996).

Drinking to cope (see Appendix D.5 for 9.4.5.3). Drinking to cope as it was told "people who drink have worries" (P-1). Participants mentioned about the change in their own behaviour over the years. Drinking when young was about gaining confidence but over the years the motive changed as they drank for enhancement motives. The similar findings were mentioned by Palmqvist, Martikainan & vonWright (2003).

Change (see Appendix D.5 for 9.4.5.4). Change seemed to occur when there was change of culture. Also environment, economy and introduction of certain policies and procedures were contributors of change. Changes in economy reported to have changed students' habits, pre-drinking was reported to be increased because going out often was not affordable for students anymore.

In conclusion, the themes emerged during focus groups complemented the findings of interviews as there were several more sub themes emerged and showed to be additional factors to be considered while exploring alcohol use context. In addition, these additional factors will be discussed for implementing during interventions.

9.6 Chapter Summary

Chapter 9 reports the results of focus groups organised with members of staff at the university. The analysis of the focus groups adopted framework analysis. A number of subthemes emerged under five themes: action/interaction, causal conditions, intervening conditions, contextual conditions and consequences. The results are presented and research questions are addressed in this section.

Chapter Ten: Synthesis: The Relationship between Quantitative and Qualitative Findings

10.1 Introduction

This chapter links all four phases of the mixed methods study and provides a synthesis of the results which emerged in relation to outcome variables and theories used. As well as providing linkage between two qualitative pieces of research, the chapter also discusses and links previous research to the current research. At the end, the integration of all four parts of the research is presented.

10.2 Alcohol Behaviour

10.2.1 Frequency of alcohol use. Frequency of alcohol use seems to be dependent on the frequency of parties at the university or to what groups students belong to e.g., sports teams seem to drink more than others. With regards to quantitative results, 30% of students consumed alcohol monthly or less, 36% 2-4 times per month, 23% 2-3 times per week, 10% 4 or more times per week.

10.2.2 Units consumed. Units consumed was reported to be dependent on the number of people involved in a drinking session as students reported drinking more with a more people present and less with less people or "more shallow" as cited by one participant. Being in a good mood was more about drinking more; although some students reported if they did not enjoy the party, they would be drinking more (P-11). The longer the drinking session, the more units were consumed. In addition, availability of a favorite drink predicted more alcohol consumption. Quantitative analysis revealed

that 36% of the students drank 1 or 2 units on a single occasion, 25% drink 3-4, 18% of students had 5 or 6, 12% had 7-9, 5% of them 10 or more.

10.2.3 Past binging. There was not much consideration given to time in the previous qualitative studies; past behaviour predicted interaction with all the components in the path analysis (during phase I). Interview data showed students were consuming more alcohol during their first year than their second or final year. Students who joined the sports team when they started university drank more in their first year. Descriptive statistics showed 24% never binge-drank, 30% drank less than monthly, 28% drank monthly, 12% weekly and 2% drank almost daily.

10.3 Theories Used

10.3.1 Prototype Willingness Model (PWM). In relation to prototype perception, the words students were using to identify drinkers and non-drinkers were different to the ones identified in previous research (Todd & Mullan, 2011). Binge drinkers were seen to be fun, sociable, friendly, popular, confident, easy going, less reserved, as well as noisy; they are the ones who cannot behave, cannot control themselves, need alcohol to "loosen up" and have low self-esteem. The participants identified non-drinkers to be easy going, sociable and religious. "They can be boring". "They ruin the party", or "They are the ones who would like to be in a better place". In regards to willingness, how a student would respond if they were offered a drink, it was found that when they had enough to drink, some participants were still willing to accept more but some of them said they would stop if they had had enough.

The theme of knowing one's limits emerged during interviews. Students seem to have their own ways of identifying if they had had enough alcohol e.g., "if I become clumsy I stop drinking".

According to the responses obtained during the interviews, most respondents found the idea of seeing themselves as a drinker or a non-drinker, unclear. Although some participants said even if they drink they did not see themselves as a drinker, they were more likely to see themselves as a non-drinker. It seemed that although they drink, they compared themselves to non-drinkers. Maybe this is because although they drink, they think they don't drink as much as a drinker. The students, who did compare themselves to a prototype of a drinker or a non-drinker, compared themselves to both prototypes. Results of the quantitative analysis showed a significant contribution of willingness to intention to drink and direct effect of behaviour. Prototype perception was not a significant predictor.

10.3.2 Self-Determination Theory. With regards to self-determination theory participants mentioned good health as a motivator for keeping within safe limits or not drinking at all, which is identified regulation within quantitative findings. Identified regulation was shown to be a significant contributor of subjective norm, attitude, willingness, outcome variables and change. Several participants mentioned shame as a factor for keep away from alcohol which was identified as introjected regulation and it also came out as a significant variable in the present study and it was a predictor of attitude, self-efficacy and prototype. Some students reported abstaining from drinking and enjoying doing so, which can be seen as intrinsic motivation. Intrinsic motivation in quantitative research showed to be significantly predicting attitudes, subjective norm and prototypes. External regulation in qualitative research appeared under the theme of avoiding negative consequences. External regulation within SEM models significantly predicted attitude, PBC and subjective norm. Motivation to drink and avoiding negative consequences can be seen as motivation

within quantitative research and they both come under intervening conditions and consequences respectively.

10.3.3 Theory of planned behaviour. In regards to intention, students reported alcohol use to be a more spontaneous activity which is decided there and then. Only a few of them said they plan to drink when they go out. Students' attitudes towards drinking were "fun", "gives confidence", "harmful". Subjective norm was under intervening conditions and came under beliefs that participants had. At the same time the link between significant others (injunctive norms) emerged under contextual conditions. Students reported having less to drink while with their parents. Obviously when students are with parents they think their parents do not approve of them drinking excessively. Quantitative findings revealed a significant contribution of attitude, subjective norm, self-efficacy to intention. Attitude predicted willingness. Subjective norm had a direct effect on AUDIT total and AUDIT consumption. Change was predicted by PBC and subjective norm.

10.3.4 Social learning theory. Regarding social learning theory, drinking to cope and staying safe techniques variables come under consequences in the conditional matrix. Positive and negative alcohol expectancies are described under causal conditions.

In addition to what has been explored, the conditional matrix provided some contextual elements, in other words the social aspect, which is contributing to alcohol consumption. The following themes seem to be affecting the behaviour: celebration, location, duration of drinking session, number of people, mood, enjoyment of occasion, year of study and culture.

Quantitative research addressed variables which were represented in the conditional matrix as intervening conditions. In other words, intrapersonal which occurs

in the individual's mind. Quantitative data provides direction, cause and effect and mediators which could not be addressed with the conditional matrix. The conditional matrix is not about linear explanations but the more complicated interaction between the variables in the 3 dimensional matrix (Strauss & Corbin, 1998).

10.3.5 Change. Students who reported becoming religious changed their drinking habits and having responsibilities such as work and family, also changed students' behaviour. As they moved from first year to second and third year there were fewer opportunities to drink. One student reported living in her village she did not get to go out much and moving to a town made alcohol more accessible. During the interviews, a student who was previously addicted to drugs and alcohol described the change in his life when he realised his potential to learn things. It was also about accepting his addictive personality and channeling it to acquire new knowledge. Being able to successfully complete college and start university encouraged him to give up his old addictive habits. He was previously careless (addictive personality, sensation seeking), used alcohol to cope with both positive and negative emotions (drinking to cope, impulsivity), did not care much about other people (subjective norm, prototype). He believed that alcohol was the way of escape for him. Change in focus groups manifested in a change of culture, environment, economy and introduction of certain policies and procedures were contributors of change. Quantitative research pointed that predictors of change were identified regulation, PBC, introjected regulation, subjective norm, past behaviour, attitude.

10.3.6 Integration of interviews and focus groups. A social-ecological framework explains the alcohol consumption within several layers nested within each other. Individual level nested within micro level, which is the home and school environments. Micro level is nested in community and community is nested within

macro policy level. Macro level is the level in which advertisements and alcohol related policies, which influences all the levels for changing people's attitude and beliefs thus influencing families and school environments and spreading to wider communities (Sudhinaraset et al., 2016).

While the social-ecological framework explains the levels (e.g., macro) involved, the conditional matrix was recommended for model building and it assists in explaining behaviour in a very abstract non-linear way (Strauss & Corbin, 1998). Behaviours happen in social settings (Michie et al., 2014) and there are factors which influence each other which cannot be simply explained by social cognitive models (Van Wersch & Walker, 2009) and the quantitative analysis of the behaviour.

The matrix includes social, attitudinal, and intrapersonal influences, which explain the changing and evolving culture of drinking. Social factors are contextual conditions, attitudinal are action/interaction, consequences and causal conditions, intrapersonal are intervening conditions. All of them interact and merge to create the behaviour. The conditional matrix complements a social ecological framework with the attitudinal factors and intrapersonal factors, the factors occurring within an individual mind (Van Wersch & Walker, 2009).

Macro level influence is advertising which influences social norms by changing them and making, for example, alcohol use more acceptable behaviour as it becomes glamorised and it is known that alcohol is frequently advertised on TV and in social media. Alcohol consumption is not only affecting health but shortening people's lives (WHO, 2015) and advertising alcohol in social media is still not regulated. Policies introduced are shown to be influencing people's behaviour either positively or negatively as research shows that consumption increased after the policy was introduced (Fitzgerald, Angus, Emslie, Shipton, and Bauld, 2016). The following themes have been

emerging from interviews in regards to the macro level: “environment”, “policy”, “economy”, “accessibility” and focus groups with added “communication” and “people and organizations involved” (see Figures 8.6 and 9.1).

These macro level factors are affecting student behaviour (see Figure 9.1). For example, in regards to current “economy”, the influence of the 2008 recession was that students did not go out as much as tuition fees and rent for accommodation had increased, and students could no longer afford drinking out. This has changed students drinking habits by increasing pre-drinking activities which are leading to excessive alcohol use. It is becoming more common for students to drink in the house or onsite. It partly depends on the various “accessibility” factors such as there are no jobs in the area, or most of the nightclubs were closed down, and cheap alcohol is available in supermarkets and local shops (see Figures 8.6 and 9.1).

The environment does have an influence on students’ choices as a study by Kuo et al. (2003) assessed college environment for the promotions of drink, advertising and also the environment outside the college. The results showed that 60% of the off-premise venues offered beer promotions, three quarters of onsite establishments offered special prices during weekends and half of onsite establishments offered beer promotion. Making alcohol available by reduced price, offering large quantities of alcohol, offering promotions within the college setting and outside and advertising, has increased binge drinking and on-site and off-site alcohol promotion was associated positively with the number of drinks consumed Kuo et al. (2003). The authors suggest that targeting advertising and promotions both on-site and off-site can be good interventions in reducing alcohol use Kuo et al. (2003). Environmental factors manifested in themes like “communicating messages and effect of social media”, “accessibility” during interviews and “communication” during focus groups.

Participants talked about the glamorising of alcohol in social media, and promotion of parties within university, and the availability of alcohol in the area.

Communication. The messages communicated differed according to which department participants of focus groups belonged to.

The historical cultural and personal factors contribute to the behaviour as alcohol was a part of the culture for centuries starting with the use of alcohol as a safe drink to be used during the shortage of fresh water, after which it moved on to be a source of relief for laborers working in a hard labour jobs and the pint was a way of relaxing after work (Vallely, 2005). Alcohol now became a way of socializing and very much accepted within the culture and is seen as a way of relaxing and celebrating occasions. The themes like "the way of being", "culture" and "enjoyment or celebrating the occasion" have emerged during interviews and focus groups. When participants talked about "culture" several points were made, for example, they mentioned the role of alcohol in British culture, culture of sports groups and change of culture. Interestingly, the participants cited that over the years the culture changed as culture became less tolerant towards alcohol, or the increased number of international student affected the drinking culture at the university, the consumption was reported to have decreased (see Figures 8.6 and 9.1). Culture play a considerable role as the results of previous research showed that Anglo-Americans used alcohol more than their African American peers (Brannock et al., 1990; Warheit et al., 1995), or there is a difference in drinking culture between Northern and Southern Europeans (Landberg, 2012). Interviews and focus groups both reported cultural differences. Participants from Caribbean culture and Greek student's spoke about the difference in cultures (see Figures 8.6 and 9.1).

Microsystem was defined as family and home environment, the alcohol use behaviour of peers and family members and parental control (Sudhinaraset et al., 2016). Peer influence was shown to increase during late adolescent years and with parental modeling of health related behaviours. Additionally, monitoring the friends they made defined alcohol use (Schwinn & Schinke, 2014). In regards to the microsystem, in interviews the following themes were presented "responsibility", "family, friends, colleagues/familiarity of people and their expectations", "number of people" "accessibility", "year of study", "other people', drinking behaviour" "experimenting". In focus groups, "drinking alone" was one of the factors which would represent microsystem interference (see Figures 8.6 and 9.1).

Micro and macro level have conflict within each other with regard to the drinking behaviour. Drinking causes antisocial behaviour, fatalities, abuse and dependence and poor health conditions. In micro and personal level, drinking has been given positive connotations as the being a source of enjoyment, stress relief and used to cope with worries and both negative and positive emotions. The mismatch between positive and negative effect can be because of the addictive properties of alcohol. Research showed that it is difficult to resist those impulses which are automatically triggered (Wiers & Stacy, 2006). Further down the line, excessive use can be a cause of disease and addiction (Rehm et al, 2009).

Individual level describes race/ethnicity, immigration status and socio economic status (Sudhinaraset et al., 2016). As mentioned earlier within theme of "culture", some information was obtained in relation to alcohol consumption of various ethnic groups and in focus groups participants mentioned about drinking habits of Northern European and Southern European cultures. Furthermore, based on the conditional matrix large numbers of themes emerged in intervening conditions (intrapersonal), action interaction

(attitudinal), causal conditions (attitudinal) and consequences (attitudinal) variables (see Figure 8.6 and 9.1). The examples for them would be: “age”, “lifestyle changes”, “responsibilities”, “information and knowledge”, “future self/role model for children”, “self/self-image”, “personality”, “negative life events”, “attitudes and beliefs”, “positive effect on health, body and self”, “positive alcohol expectancies” “escapism”, “drinking to cope” and many more (see Figures 8.6 and 9.1)

With regards to age, in the current study first year students reported more opportunities to drink with their peers, and the research suggests that meeting friends and being with unfamiliar people usually predicts more alcohol use whereas being with friends students feel they can say no (Van Wersch and Walker, 2009). The 12 year follow up study by Grant, Stinson, and Harford (2001) revealed that the late onset of drinking predicted later alcohol abuse and dependence. The results showed alcohol dependence in 1989 and 1994 were reduced by 5% and 9% for each year that drinking onset was delayed. In 1994 alcohol abuse was reduced by 7% each year that drinking onset had been delayed. Alcohol abuse and dependence was strongly related to the factors such as being male, unmarried, divorced or separated and younger. At the end of the experiment the participants’ alcohol dependence showed to be related to the family history of alcoholism (Grant et al., 2001). The research suggests that delaying the onset of alcohol use will delay alcohol dependence and abuse and the results of the study can be used for intervention purposes (Grant et al., 2001).

Similar results were reported in Muthen and Muthen (2000), starting alcohol at the age of 14 or earlier was related to the heavy drinking and severity of alcohol related problems. During interviews similar experiences of alcohol use have been reported by several participants. Having a family history of alcoholism either put off the student from drinking as much as a parent, or in one case it was the result of early onset of

alcohol use (at the age of 14) and later developed to alcohol and drug use and dependence. The examples of those experiences have manifested themselves in "drinking to cope", "negative life events", "negative effect on health, body and self", "negative alcohol expectancies" and "escapism" during interviews (see Figures 8.6 and 9.1).

Perceived norms, which consist of normative beliefs and injunctive norms were shown to be predicting alcohol use, which is perception of others drinking behaviour or them approving the behaviour. Research showed that it is more complicated than including normative beliefs, as there are cultural norms, parental modeling, familiarity of people, conformity and many more factors which can be related to behavioural performance (Grønkjær, Curtis, De Crespigny, & Delmar, 2011; Howell, Leyro, Hogan, Buckner, & Zvolensky, 2010; Lieb et al, 2002).

Social influence is one of the determinants of behaviour (Schwinn & Schinke, 2014). In late adolescent the switch between strong influences of parental attitudes to peers influence occurs (Kandel & Andrews, 1987; White, Bates, & Johnson, 1991). Borsary and Carey (2001) found in their review that the influence has several components: direct peer influence, modeling and perceived norms. Direct influence is when a peer offers a drink, the students were more willing to accept it as they wanted to make friends being in a new environment and being with friends they knew they would have more resilience not to accept a drink (Borsary & Carey, 2001; Klein, 1992). Participant of interviews expressed similar views under within "family, friends, colleagues/familiarity of people and their expectations", "other people's drinking behaviour". In focus groups "people (their expectations) and organisations involved". The amount consumed was dependent on the size of the group people were socialising

(Cutler & Storm, 1975). During interviews students reported the amount consumed to be dependent on the "number of people" involved in a drinking session.

Having a family history of excessive drinking affects a person's drinking rate greater than people with no such background (Chipperfield & Vogel-Sprott, 1988). A similar idea was reported under "negative life events", "avoiding negative consequences", "escapism", "drinking to cope". Perceived norms in the literature were divided into: descriptive norms which are a perception of frequency and quantative of others drinking and injunctive norms are the approval of the behaviour by others. These factors have been shown to influence behaviour performance in the literature (Perkins & Wechsler, 1996). Perceiving that others drink more leads to more consumption (Perkins & Wechsler, 1996). The idea of descriptive norms and injunctive norms were expressed within "family, friends, colleagues/familiarity of people and their expectations", "other people's drinking behaviour" in interviews, and in focus groups was under the theme "people (their expectations) and organisations involved".

A study by Oostveen, Knibbe and De Vries (1996) explored situational factors (direct social pressure and importance of socialising) and cognitive social influences (social norms and modeling) on drinking behaviour in which results showed the social norms of family and peers, the importance of socializing and modeling predicted 15%, 7% and 2% respectively. Cognitive social factors such as norms of family and friends and situational factors (socializing) predicted most of the variance. Authors suggested taking modeling into account as it might add to the variance. The research showed that heavy drinkers thought that their family and friends were more in favour of their drinking and tended to drink in a big group. Current research showed that there was a relation to the number of people in the group, which for most participants meant more alcohol consumption. It is also in line with research on injunctive norms, in which

perceived approval of behaviour predicted more drinking. Social norms of family and friends, importance of socializing and modeling predicted frequency of use (Oostveen et al., 1996).

Borsary, Murphy and Barnet (2007) reviewed literature to investigate moderators and mediators for the first years of students' alcohol use. Moderators of alcohol use were sensation seeking and the reason for escalated alcohol use (White et al, 2006). Impulsivity factor was also related to the moderator (Hair & Hampson, 2006). Race and gender were also shown to be a moderator as Anglo- Americans drank more than Hispanic or African-Americans (O'Malley & Johnston, 2002). Female students drink less than their male counterparts (Landrine, Bardwell, & Dean, 1988), though some literature suggests that the consumption of male and female are the same during college years (White & Jackson, 2004). Religiosity defined consumption as religious students were known to be drinking less than the ones who were not religious (Crocker, 2002). "Religion" emerged as a theme during interviews. Students who reported being religious drank less, or in one case starting to go to the church and practicing religion changed the person's habits of consumption. Another moderator was pre-college alcohol use, the students previously involved in drinking maintained or increased their use of alcohol (Baer et al., 1995). Around 40% to 50% of students who were not drinking prior to enrolment adopted the behaviour (Lo & Globetti, 1993).

Parental influence was shown to be an intervening factor with alcohol use, as the students who had parental approval were having negative consequences from alcohol use (Boyle & Boekeloo, 2006). Johnson and Johnson (2001) found that parents can influence their children by modeling, challenging their beliefs and affecting their friend selection. Several participants talked about their parents drinking behaviour, either parents approved of them drinking or not, even the way they thought they'd affect their

siblings or children made them think of their own behaviour. Examples can be found in "family, friends, colleagues/familiarity of people and their expectations", "future self/ role model for children" in Chapter 8 (interviews) and "people (their expectations) and organizations involved" in Chapter 9 (focus groups).

Mediators were coping, alcohol expectancies, drinking motives, perceived norms, Greek membership and participating in drinking games. The review identified drinking to cope was more about first year students trying to cope with negative emotions, or sometimes anxiety and depression (Borsary et al., 2007). "Drinking to cope", "positive alcohol expectancies", negative alcohol expectancies" "the way of being", "culture" were mentioned and can be found as they were cited during interviews. In regards to drinking games "location, activity duration of a drinking session" demonstrates students' views on drinking games, which they saw as increasing alcohol use during the party and creates pressure as they would like to be involved in games. Rutledge and Sher (2001) identified a positive relationship between stress and alcohol consumption among first year students. Drinking motives were about fitting in and to be popular (Johnson, Rodger, Harris, Edmunds & Wakabayashi, 2005; Maggs, 1997).

Both in interviews and focus groups participants reported the importance of being accepted which created stress, and alcohol seemed to be the way to cope with overcoming shyness, to make new friends and fit in; being around unfamiliar people for some who were anxious and did not have the social skills, alcohol was a way of escape. The themes which can be found are: "family friends, colleagues/familiarity of people and their expectations", "drinking to cope", "positive alcohol expectancies" in interviews and "drinking to cope" in focus groups. Being anxious and using alcohol as an escape meant an increase in mental health issues among students over the last 2 years

and the examples are given under “negative life events” which emerged during focus groups data analysis. Perceived norms were concluded to be effecting the drinking as students tend to overestimate their peers drinking (Borsary et al., 2007). Students seem to think that they do not drink more than their peers, regardless of the amount they consume. Greek membership was mentioned to be a mediator and drinking games predicted to be increasing alcohol use and frequency of it, and also predicted more negative consequences as a result of playing drinking games (Adams & Nagoshi, 1999; Engs & Hanson, 1993). One Greek participant talked about his nights out and the drinking culture in Greece, the examples of which can be found under “culture” in Chapter 8.

In the focus groups it was reported that there was five-time increase in mental health problems within students in halls of residence compared to last year. Research by Blanco et al. (2008) reported the characteristics that increased the risk of having mental health issues within students who consume alcohol were being male, having stressful events for the last year, having relationship issues and being away from parents. By comparison, being Black, Asian and Hispanic and with family, being in good health and having an income of $20000 to $35000 increased the chance of psychiatric disorders Blanco et al. (2008). The research also suggested that actually being in education students were less likely to have psychiatric disorders than their peers who were not attending college. The theme of “finance” emerged during interviews and focus groups, such as having less disposable income meaning poorer quality of life. In addition, one of the students was an alcoholic and a drug addict, but after joining the university his life changed as he realised his potential and what he is capable of if he tries his best (see sections 8.9.3.27 and 8.9.3.29).

The ideas which arose within intrapersonal and attitudinal level in interviews and focus groups were under the heading of intervening conditions, causal conditions, consequences and action/interaction. Qualitative study provided a systematic explanation but at the same time a non-linear way of explanation of behaviour. Quantitative study explored the variables, their relation to each other and identified mediators which are affecting the variables explored, namely TPB, PWM, SDT, social learning theory and personality variables.

10.4 Integration of All Four Phases of Research

The table below is the synthesis of all parts of the research. It was constructed by linking together quantitative variables to the themes which emerged during qualitative research and examples of manifestations of the themes emerged during interviews and focus groups (see Appendix E.1 for complete table).

Table 10.1
Integration of the Results of Studies

Theme	Variables used in quantitative study	Examples of quotes from interviews illustrating the theme	Examples of quotes from focus groups illustrating the theme
Positive effect on health, body and self		"Helps with falling asleep"	"To have confident feeling to make friends, to talk to somebody and not be somebody in the corner, when they drink they feel brave"
Negative effect on health and body and self		"Skin starts to break out"	"There were number of student who had depression type symptoms as a result of overindulging"
Positive alcohol expectancies	Expectancies	"Relax mainly that's what I use it for"	"If they are on their own and they have not made friends, you got a lot more filling up faster, to feel integrated"

Negative alcohol expectancies	Expectancies	“Might be involved in an accidents at home, anywhere”	“Some people can be aggressive, some people get depressed”
Escapism	Drinking to cope	“It helped dealing with positive and negative emotions”	“It settles you… you take that worry out of you”

Chapter Eleven: Discussion and Conclusion

11.1 Introduction

This chapter provides a summary of the mixed method study. It begins with the aims and discusses the findings, after the hypothesis and the research questions are revisited. Recommendations for the policy and practice are provided, and specific questions of focus groups are addressed. Further recommendation for future research and limitations of current research are described. The chapter ends with contribution to the knowledge.

11.2 Research Aims

Principal aim of the research

The general aim of the research is to explore students' alcohol use and misuse taking into account personal, micro and macro level factors influencing their choice in behavioural performance.

Objectives

To identify factors which contribute towards alcohol misuse in students based on analysis of quantitative data obtained from longitudinal surveys and interpreting narrative data obtained during interviews.

To conduct focus groups with members of student support services to gain more understanding of the behaviour and explore current practices to discuss and recommend variables to be targeted during interventions for students.

11.3 Brief Summary of the Main Findings

The aim of the research was to explore students' alcohol use and misuse taking into account personal, micro and macro level factors influencing their choice in behavioural performance. The current study was initiated to investigate student alcohol use with the application of mixed methods. The research aimed to create the bigger and more or less complete picture of alcohol use. The quantitative part explored the behaviour with the use of TPB, PWM, SDT and Social Learning theory. In addition, personality factors were added. In order to explain the contextual side of alcohol use and provide further explanation of the variables explored in the quantitative chapter, qualitative interviews with students and focus groups with members of staff of university were conducted.

In order to investigate the theories used in the study, and to check for the reliability of the first questionnaire constructed, a pilot study was conducted. The pilot study showed a good reliability of the questionnaire items ranging from alpha 0.62 to alpha 0.98. The questionnaire was too long and some of the items were changed in the revised version of the questionnaire in which the current research and the recommendations of the previous research were considered. The pilot study also allowed the investigation of the correlation between the study variables. Multiple regression analysis was performed following Cooper and Russell (1988). Interestingly, the variables which were not explored in Cooper and Russell's (1988) study, for example self-determination theory components showed strong correlation with study variables. Furthermore, when multiple regression was conducted, it identified regulation and contributed to the prediction of alcohol consumption.

The results of the multiple regression in which there were three outcome variables, drinking to cope, alcohol consumption and prediction of alcohol related

problems were addressed. The contributors of drinking to cope were positive alcohol expectancies, age and motivation. The model predicted 43% of the variance. The contributors of alcohol consumption were behavioural intention, drinking to cope and identified regulation, 56% of the variance was predicted. Alcohol related problems were predicted by alcohol consumption and subjective norm. The last model predicted 51% of the variance. The sample size used for the pilot study was small (N=100) to draw structural equation models (SEM) models, though the current study replicated Hagger et al. (2012) it included more variables and thus the findings of the pilot study were in line with Cooper and Russell (1988). Cooper and Russell (1988) reported positive alcohol expectancies and avoidant coping styles of coping predicted 25% of the variance in drinking to cope. The result complemented the current research. In relation to the second model of alcohol consumption, the results were similar to Sale et al. (2005), alcohol expectancies and drinking to cope, predicted variance in alcohol consumption. Identified regulation was a significant predictor in drinking to cope in the pilot study; similar results were reported in Hagger et al. (2012). The third model results were in support of French and Cooke (2012), the authors reported subjective norm to be contributing to alcohol consumption. The pilot study confirmed that the variables chosen to be explored might reveal more when the data allows drawing path models as the correlations showed a strong, significant correlation between study variables, for example intrinsic identified and introjected regulation were significant predictors of alcohol consumption.

Due to the fact that there were no studies conducted addressing the theories and variables in the current study there was a need to construct a questionnaire. The initial questionnaire designed during the pilot provided information on reliabilities of the items and certain decisions had to be made to improve some of the items; for example

perceived behavioural control. Also there was a need to shorten the questionnaire, for example self-esteem was omitted as it did not show significant contribution in previous research. More detailed information can be found in Chapter 5.

The next stage of the research in which hypothesized models were explored for predictive properties of STD, TPB, PWM, social learning theory and personality constructs (see Chapter 6) were followed by a longitudinal study in which predictors of change were identified. There were identified regulation, PBC, introjected regulation; subjective norm, attitude and past behaviour (see Chapter 7).

11.4 Hypotheses for Cross Sectional Study (Phase 1)

As it was described in Chapter 3, the research consisted of 4 phases.

Phase I findings were as follows.

Several path analytic models have been drawn following Hagger et al. (2012) but more outcome variables have been addressed; frequency of alcohol use, units consumed in single occasion, AUDIT scores, past binging behaviour and AUDIT consumption (see Figures 6.4, 6.5, 6.6, 6.7, 6.8).

11.4.1 Hypothesis 1.

H1 Social cognitive constructs of TPB will be predicted by motivational orientation

All five models (see Figures 6.4, 6.5, 6.6, 6.7, 6.8) supported H1 of the current study, introjected regulation was a strong negative predictor of attitude in all five models, and it was also a significant negative predictor of self-efficacy in all five models. Identified regulation was a significant predictor of subjective norm in all five models. External regulation was a strong negative predictor of four models except past binging behaviour

model; it was also a significant positive predictor of attitude in all models. Intrinsic motivation did not predict any of TPB components.

The results partly supported Caudwell and Hagger (2015). Caudwell and Hagger (2015) found that autonomous forms of motivation (identified regulation and intrinsic motivation) predicted attitude and subjective norm, whereas current research identified regulation was only a predictor of subjective norm but not attitude; intrinsic motivation did not significantly predict neither attitude nor subjective norm in relation to controlled forms of motivation, Caudwell and Hagger (2015) reported significant negative relation of controlled forms of motivation with attitude and PBC. These results were different from current research in which it was found that controlled forms of motivation, external regulation was a significant negative predictor of PBC and positive predictor of attitude. It must be due to the fact that the controlled form of motivation was entered as two separate variables, introjected regulation and external regulation, also external regulation is on the other side of the motivation continuum, close to amotivation, offered by Ryan and Deci's (2000) taxonomy of human motivation, thus it is a positive predictor of attitude. Introjected regulation was a significant negative predictor of attitude and self-efficacy.

Different to the work of Hagger et al. (2012) in which the researchers looked into the relationship between independent variables in T1, their prediction of dependent variables in T2 or the same, was adopted for T2-T3 in the current research cross-sectional data was applied to path analysis.

Similar to Hagger et al. (2012), in the first five models intrinsic motivation did not predict any of the TPB components. Identified regulation predicted subjective norm which were also observed in Hagger et al.'s (2012) study. Also, different to Hagger et

al. (2012) external regulation did not predict subjective norm, but had a positive relation to attitude in Hagger et al. (2012) where it was reported to be negative.

11.4.2 Hypothesis 2.

H2 Changes in TPB and PWM components will contribute towards changes in intention and behaviour

Hypothesis 2 was partly supported, TPB components attitude and self-efficacy were a strong positive predictor of intention, and subjective norm was a significant negative predictor of intention. In all five models (see Figures 6.11, 6.12, 6.13, 6.14, 6.15, 6.16) in which frequency of alcohol use, units consumed in single occasion, AUDIT scores, past binging behaviour and AUDIT consumption were set as outcome variables.

The results in relation to prediction of intention were observed in the current study: attitude and subjective norm were predictors of intention. This was supported with previous studies (Caudwell & Hagger, 2015; Duncan et al., 2012) Different results were observed in relation to PBC, Hagger et al. (2012) found PBC to be a significant predictor of intention but in the current study none of the models of cross-sectional data showed PBC to be a significant predictor of intention. Caudwell and Hagger (2015) in a cross sectional research study, found PBC to be a direct significant negative predictor of intention and a direct strong negative predictor of the outcome variable, pre-drinking frequency. Meta-analytic review of studies applied TBP and STD also showed direct strong positive relation of PBC to intention (Hagger & Chatzisarantis, 2009). Elliot and Ainsworth (2012) found PBC to be a significant predictor of intention with one component TPB model, in the two component TPB model PBC was not a significant predictor of intention.

Several path analytic models have been hypothesized, combining SDT, TPB and PWM components (see Figures 6.11, 6.12, 6.13, 6.14, 6.15, 6.16). In regards to PWM components, subjective norm and attitude was a significant predictor of intention, past behaviour was a direct and indirect predictor of all outcome variables (AUDIT consumption, AUDIT problems, AUDIT total, units consumed, frequency and binging occasion). Willingness was a significant predictor of intention and a direct predictor of AUDIT consumption, AUDIT problems, AUDIT total, units consumed, binging occasions but not frequency of alcohol use. The prototype was not a significant predictor in any of the models.

11.4.3 Hypothesis 3.

H3 Relationship between controlled motivation (external regulation and introjected regulation) and alcohol consumption will be mediated by subjective norm

Hypothesis three was not supported.

11.4.4 Hypothesis 4 .

H4 Past behavior will be a predictor and prototypes will be a moderator within the framework suggested by Hagger et al. (2012)

Hypothesis four was partly supported, as past behaviour was a strong negative predictor of identified regulation, intrinsic motivation, introjected regulation and a significant negative predictor of subjective norm. Past behavior was a strong positive predictor of willingness; and it was also a significant predictor of intention. In addition, it was a direct predictor of AUDIT consumption, AUDIT problems, AUDIT total, units consumed, frequency and binging occasion (see Figures 6.11, 6.12, 6.13, 6.14, 6.15, 6.16). Prototype perception was not a significant predictor of any of the variables. In relation to past behavior the results were in line with the findings of Hagger and

Chatzisarantis (2009), past behavior was a strong predictor of behavour, intention, attitude, PBC and motivation.

Model 6.6 was checked for prediction of PWM components following Hagger et al. (2012) and Todd et al.'s (2016) model of PWM, the conceptualized model was drawn. One significant predictor of alcohol use within self-determination theory identified regulation was entered into the model. Additionally, TPB and PWM constructs have been used. Prototype did not show to be significantly contributing to any of the variables. Past behavior in this case was a strong negative predictor of subjective norm, which was not observed in the previous models, and a direct predictor of AUDIT. Willingness was a direct and indirect predictor (through intention) of AUDIT consumption. Willingness predicted a 27% variance which was contributed from attitude, identified regulation and past behavior. The results reported in relation to willingness in the previous study showed that the contributors of willingness were subjective norm, attitude, PBC and prototype similarity (Rivis et al., 2011).

11.4.5 Hypothesis 5.

H5 Drinking to cope will be a mediator between alcohol consumption and alcohol related problems.

Following Simons et al. (2005) (see Figure 6.10) the path analytic model which included gender, personality factors and drinking to cope and positive alcohol expectancies to predict AUDIT problems through consumption. Hypothesis five was supported as drinking to cope was a strong positive predictor of AUDIT consumption. It was linked to AUDIT problems directly and indirectly.

11.4.6 Hypothesis 6.

H6 Personality factors, extraversion, neuroticism and impulsivity will be positively related to alcohol use.

Model 7 (see Figure 6.10) partly supported hypothesis six as only neuroticism and impulsivity were significant predictors of AUDIT problems but not AUDIT consumption. Extraversion did not contribute significantly.

11.5 Hypotheses for Longitudinal Study (Phase 2)

Longitudinal results of current mixed methods research was conducted to see the contributors of change between time 1 and time 2 outcome variables: AUDIT total, AUDIT problems, AUDIT consumption, frequency, binging, AUDIT 3 and a model without including past behaviour.

Following path analytic models in cross sectional data (see Figures 6.11, 6.12, 6.13, 6.14, 6.15, 6.16) the same variables have been used to predict change of variables of time 1 to predict outcome variables of AUDIT total in time1, AUDIT problems in time 1, AUDIT consumption in time 1, frequency in time 1, binging in time 1 AUDIT 3 in time 1 and the same outcome variables in time 2 (see Figures 7.1, 7.2, 7.3, 7.4, 7.5, 7.6)

11.5.1 Hypothesis 1.

H1 Social cognitive constructs of TPB will be predicted by motivational orientation

The same models, as in time one (see Figures 6.8, 6.9, 6.10, 6.11, 6.12, 6.13) were checked for its fit in predicting change over a 3-month time in all outcome variables, AUDIT total, AUDIT problems, AUDIT consumption, frequency, binging, past behavior and AIDIT 3. In predicting change, interestingly, identified regulation did

not contribute to TPB (see Figures 7.1, 7.3, 7.4, 7.5, 7.6), accept for model 2 (see Figure 7.2) when change in AUDIT problems was explored, identified regulation was a strong positive predictor of attitude in the model predicting change AUDIT problems.

Interestingly, identified regulation was not a significant contributor. It was only positively predicting attitude in the model predicting change in AUDIT problems. In regards to intrinsic motivation, different to cross sectional path analysis, in which intrinsic motivation was a predictor of prototype perception, in predicting change, intrinsic motivation was a significant positive predictor of attitude and subjective norm. Similar to cross sectional path analysis external regulation did not contribute to any of TPB components in predicting change in all models. Amotivation showed to be a significant predictor of PBC, subjective norm and prototype in predicting change, whereas it was significantly predicting attitude, subjective norm and prototype in cross sectional path analysis. Introjected regulation significantly negatively predicted attitude and prototype in predicting change but cross sectional data showed it only negatively related to attitude.

Hypothesis 1 has been supported, though in predicting change most of the self-determination theory components were contributing to different components of TPB.

Hagger et al. (2012) reported that intrinsic motivation had a small effect on attitude in the T2-T3 model, whereas in the current study intrinsic motivation was a strong predictor of attitude in all models (see Figures 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7). May be it is due to the fact that the results are being reported when PWM components were entered into the equation. Identified regulation predicted subjective norm in a previous study while predicting change (Hagger et al., 2012), whereas in current research it was not significant. It was a strong negative predictor of AUDIT total time 2. External regulation was reported to have a positive effect on subjective norm in

previous research (Hagger et al., 2012), the same was observed but with the model predicting change in AUDIT total only. In addition, Hagger et al. (2012) reported a small negative effect of external regulation to attitude (T1-T2), which was not observed in the current research.

11.5.2 Hypothesis 2.

H2 Changes in TPB and PWM components will contribute towards changes in intention and behaviour

H2 was supported as attitude was positive and subjective norm were negatively related to intention in most of the models, although PBC did not significantly predict intention. In predicting change in AUDIT total, AUDIT problems PBC was a direct predictor of change.

Hagger et al, 2012 reported 3 components of TPB contribution to intention, subjective norm, attitude and PBC were significant positive contributors from T1-T2 and T2-T3.

11.5.3 Hypothesis 3.

H3 Relationship between controlled motivation (external regulation and introjected regulation) and alcohol consumption will be mediated by subjective norm

Hypothesis three was supported when predicting AUDIT total, as external motivation was a significant predictor of subjective norm. Introjected regulation was not predictor of subjective norm.

11.5.4 Hypothesis 4.

H4 Past behavior will be a predictor and prototypes will be moderators within the framework suggested by Hagger et al. (2012)

H4 was partly supported, as past behaviour was a predictor for most STD components, willingness, and outcome variable in time 1, in some cases attitude in predicting change in outcome variables. In regards to prototype with the model predicting change in AUDIT consumption, it was a moderator between amotivation and AUDIT consumption and introjected regulation and AUDIT consumption. The same was observed in relation to the moderating effect between amotivation and AUDIT 3, Introjected regulation AUDIT 3.

11.5.5 Hypothesis 5.

H5 Alcohol consumption will be moderator between drinking to cope and alcohol related problems.

11.5.6 Hypothesis 6.

H6 Direct contributors of change will be PBC in predicting change

Hypothesis 5 supported PBC and was a direct predictor of change (see Model 7.1, 7.2).

11.5.7 Hypothesis 7.

H7 Intention will not be a direct predictor of alcohol use in predicting change.

Following Hagger et al. (2012) the following hypotheses 6 and 7 have been identified. The hypotheses have been supported as intention did not significantly predict binging, or any of the outcome variables (see Model 7.5, 7.7).

11.6 Interviews

Phase III interviews were conducted with students and it provided rich data which gave a clear idea about the combination of factors contributing to the students' alcohol use: psychological, social, socio-economic and psychosocial factors. These factors were recurring during the analysis which was in line with Tilki's (2006) study.

The results of the qualitative study were organized based on the previous research (Van Wersch & Walker, 2009). The themes which emerged from the research were in line with the conditional matrix in Grounded theory by Strauss and Corbin (1998). Although Framework analysis was applied as it is widely used within health research (Richie & Spencer, 2002) and it allows the data to be analysed using the constant comparison approach (Richie & Spencer, 2002). Van Wersch and Walker's (2009) study was the most appropriate, as it could capture the combination of psychological, social, socio-economic and psychosocial factors.

Action /interaction, causal conditions, intervening conditions, contextual conditions and consequences were used to organize data (Corbin & Strauss, 2008; Strauss & Corbin, 1998; Van Wersch & Walker, 2009). Fitting the data into a conditional matrix allowed for the exploration and the experiences in different levels and offers broad non-linear explanation to the behaviour, rather than social cognitive models (Van Wersch & Walker, 2009). Although, grounded theory was not applied, it was clear where the components of social cognitive models, TPB, PWM, SDT and social learning theory would fit within the conditional matrix.

The themes emerged, for example, attitudes and beliefs students have about alcohol was arranged under intervening conditions, which changes the impact of causal phenomena (Strauss & Corbin, 1998). If the data is explored further it would be possible to see the particular beliefs and attitudes students hold which cannot be defined by quantitative study. In addition, motivation to stay within safe limits was defined as intervening condition. If the data of the interview explored further, it could be seen that the student who is concerned more about their health would be more likely to abstain from drinking, which would be an example of having an internally valued goal to perform positive health behaviour (identified regulation) (Ryan & Deci, 2000).

It was mentioned earlier in chapter eight that twenty-three participants were interviewed as the interviews were treated as complementary research (Teddlie & Tashakkori, 2009). Qualitative research offered the information of an explanatory nature. The data allowed for seeing the impact of factors emerge and putting them into context and seeing where they fit in the matrix. In addition, the data received from participants still allowed for the definition of conditions mentioned in Strauss and Corbin (1998).

11.6.1 Research question 1.

RQ1 What are the contextual factors which contribute to students' alcohol use?

Contextual factors were shown to be family, friends, colleagues/familiarity of people and their expectations, location/activity/duration of a drinking session, number of people and mood. Also, enjoyment of occasion, availability of drink/favourite drink, accessibility, year of study, other people's drinking behaviour, the way of being, drinking alone, religion, culture, environment, communicating messages and the effect of social media and experimenting, defined the amount and the variety of habits students apply under each context.

11.6.2 Research question 2.

RQ2 Where do the social cognitive theories fit into the matrix of alcohol use among university students?

Social cognitive theory components fit into the matrix under the intervening conditions. It can be said that existence of particular beliefs, attitudes, intentions, willingness, strong will and will power, perceived difficulty or ease to perform the behaviour and the way drinker or non-drinker is perceived by the participant is the intervening condition,

the condition which changes the impact of causal conditions of the phenomenon (Strauss & Corbin, 1998).

11.7 Focus groups

Phase IV focus groups data was used to build the conditional matrix of the students' alcohol use from the perspective of members of staff of student support services (Strauss & Corbin, 1998).

11.7.1 Research question 1.

RQ1 What are the contextual factors which contribute to students' alcohol use?

The contextual factors were current economy, course at university, culture, location/place, people (their expectations) and organisations involved, enjoyment or celebrating/occasion, other people's drinking behaviour, drinking alone and communication.

11.7.2 Research question 2.

RQ2 Where do the social cognitive theories fit into the matrix of alcohol use among university students?

Intention, attitude, beliefs, perception of a drinker or a non-drinker, expectations and intention are placed under intervening conditions within the conditional matrix.

11.8 General Discussion.

Alcohol use and misuse seems to be affected by macro level, for example economy, policy related to alcohol use, advertisements and marketing of alcohol, and community level which are norms attitudes, cultural norms, gender norms (Sudhinaraset et al., 2006), in current research they manifested in themes like policy, communication, the way of being, culture and accessibility. Interference with such domains may

encourage students to choose healthy habits and behaviours (Michie et al., 2014). Although a thorough assessment of the setting and evaluation of current practices and effects of theoretically proven interventions need to be considered while implementing interventions or enforcing any policies (Michie et al., 2014) as poorly assessed policy or interventions could affect behaviour adversely (Michie et al., 2014; Fizgerald et al., 2016). Also, it needs to be taken into account that in some cases indirectly targeting behaviour could be more effective (Michie et al., 2014).

Micro systems include family and home environment, university and peers, peer and parent alcohol use and peer and parent support (Sudhinaraset et al., 2016). According to the parent or peer behaviour the behaviour of an individual can be formed by modelling them (Ary, Tildesley, Hops, & Andrews, 1993). Supportive peer and parent who does not encourage excessive drinking can be a good influence to a person (Borsari, Borsari, & Carey, 2006) and in current research subjective norm was one of the significant variables which was predicted by another significant component of self-determination theory, such as identified regulation. The result can be interpreted that the opinion of close people and their encouragement or discouragement towards alcohol use can be predicting person's alcohol use. Subjective norm, it is effected by autonomous motivation (identified regulation), which later in time 2 of the study, was a significant predictor of change. Similar results were reported in previous research (Amiot et al., 2013; Caudwell & Hagger, 2015). The qualitative studies showed the difference in patterns of drinking. The pattern differed depending who a person is engaging in drinking session with and what kind of perceptions they hold about significant other. Negative case (P-18) cited that when he was addicted to alcohol, he did not care about other people and their opinion.

Perceived control negatively linked to motivation to stay within safe limits based on external influence. It can be interpreted that students who are keeping their alcohol consumption within safe limits because they want to gain a reward or avoid negative consequences have less control over the behaviour. Caudwell and Hagger (2015) suggested people seem to engage in pre-drinking for controlled reasons (to avoid guilt, conform, to gain reward or to avoid negative consequences) to which determines lower perception of control over the behaviour than social approval. It should be noted that in current research PBC was a significant variable in predicting change, though it was not a significant predictor of intention or behaviour during time 1 analysis (see Chapter 6 and 7 for more details about quantitative findings). Interview and focus group data fit the conditional matrix (Strauss & Corbin, 1998), which explains alcohol use within 3 dimensional matrix. The results complemented previous research (Van Wersch & Walker, 2009) and served to identify factors which are in constant interaction and predict alcohol use. Also, it was found that contextual factors affected the behaviour. Contextual factors were social factors, attitudinal and intrapersonal influences. The same was observed during focus groups.

Beliefs and attitudes members of student support services have and misperceptions can influence their decision making (Lear et al., 2014), the specific questions posed for the focus groups study helped to identify those misperceptions. Identified beliefs, attitudes and misperceptions can be targeted to encourage staff to create a supportive environment for students by applying intervention design techniques (Michie et al., 2014). Screening and intervention or educational programmes will be effective if they are tailor made, as previous research suggests male are comfortable reporting online and female tend to respond well to counsellor administered interventions (Carey et al., 2009; Gordon et al., 2011). Several student safety concerns

have been mentioned during the focus groups which can be addressed by implementing alcohol related procedures within the setting as it is the way to reduce excessive consumption (Snow et al., 2003). Although it is a challenge as consumption of alcohol is seen to be a personal choice not something to be monitored (Snow et al., 2003). The theme of "personal decision" emerged during the interviews. By synthesising the findings, the following recommendations can be put together (for synthesis of four stages of mixed methods research see Chapter 10).

Qualitative research explained the variables targeted in the quantitative part of the research. Interviews revealed some contextual factors of students' alcohol consumption patterns are dependent on the people they are with, for example with family they usually do not drink much than with friends. Depending how familiar people they are socialising with, it defines their alcohol use. For example, some would find it difficult to say "no" to people they are not close to or if they are with unfamiliar people it would make it easier for them to drink more to be able to relax. In addition, other people's drinking was reported to be affecting too. Location and duration of the drinking session also were contextual factors; long parties would mean more alcohol use. Living in halls of residence is associated with more alcohol use than living in private accommodation. Bad mood was associated with less alcohol use than good mood. In regards to the year of study, first year students' drinking has increased since they started the university and the third year students reported drinking more during the first and the second year than on the third year of study.

The fact that drinking is culturally acceptable made it easy to explain why one consumes alcohol. Drinking alone meant less alcohol use, as person has more control over the behavior. Focus groups with members of staff generated one more contextual themes: current economy. According to the discussion during focus groups current

economy was effecting to the drinking pattern of the students and changing drinking habits, over last 9 years and after the recession students tend to involve in pre-drinking before going out or organise parties at home or even drink at home to save money. In addition, economy was a cause of redundancies and alcohol use is not tolerated by the employers anymore. In relation to the culture focus groups added some more explanation that culture has changed over last 8-10 years as the number of international students and most of them are either from the culture where they have a 'cafe' culture or they are from Muslim culture, in which alcohol is prohibited. Students and lectures used to go to the pub straight after the lectures and seminars sometimes took place in the pubs.

Positive and negative alcohol expectancies were marked as causal conditions. Interviews revealed that the positive expectancies students hold in relation to alcohol is it helps them to relax, be more sociable, enhances creativity, serves as a medication, gives inspiration, makes feel happy, confident, helps to forgets about things for a while. Focus groups added to the list and participants mentioned about alcohol assisting in to build confidence, person becomes less nervous, feels more integrated, alcohol helps to feel brave and helps to make friends when students start university. Alcohol helps with shyness, negative expectancies were reported alcohol becoming addictive, causing skin problems and become agitated. was reported during interviews. Whereas student during interview reported to drink to cope but they realized that it was not the way as excessive drinking caused them health problems and feeling depressed.

Attitudes and belief students hold were "Alcohol in moderation is fun", "Drinking with meal does not have the same effect", "It controls you", "It gives confidence", "Helps to relax and forget things for a while", "Helps with creativity", "works as medication" and "Builds confidence".

Focus groups participants “Helps to make helps when they start the university”, “Helps with shyness” and “is used for escape, as some student quickly fill up in the parties to feel more comfortable among new people”.

In relation to a perception of a drinker some students reported to have both positive negative opinions about the person who engages in binge drinking. One of the participants mentioned about the friends who regularly engages in a binge drinking to be very sociable people, friendly and have fun character. Whereas two participants viewed people who engage in binge drinking session to have low self-esteem and to be loud and they cannot behave. Those who had negative image see themselves to be different to those people. Two students reported to be similar to friend who regularly engages in a binge drinking but one of them still thought that people who engaged in excessive drinking could hurt others and he was not the same. In relation to nondrinker 2 participants reported that that were similar to them if they were friends, but 2 participants reported to have negative opinion as they saw them to be boring. One participant had very positive opinion about nondrinkers and said that they are someone who might want to be a better place or someone who had bad experience in relation to drinking.

In relation to intention to drink all of the participants mentioned drinking to be a spontaneous decision. All of them mentioned that they did not plan or intend to drink unless they know if they are going to a birthday party or to any celebration.

Motivation behind trying to drink within safe limits was reported to be because they cared about their health, avoid negative consequences, enjoy when they felt control over the behavior, next day responsibilities showed to be effecting the decision to stay within safe limits as well as shame.

Qualitative research assisted in defining the situational patterns of alcohol use, exact attitude and belief students towards drinking and where those components of social cognition models fit in the conditional matrix. A lot more was reported in Chapter 8 and Chapter 9.

11.9 Recommendations and Limitations

11.9.1 Recommendations for policy and practice. Several studies have been conducted to develop taxonomies for behaviour change techniques (BCT) for various behaviours, physical activity (Abraham & Michie, 2008), smoking (Michie, Churchill and West, 2011; Michie, Hyder, Walia & West, 2011) and healthy eating (Abraham & Michie, 2008; Michie & Abraham, 2004). Current interventions were reported to have no standardized definitions, techniques and theory behind while conducting them which makes it difficult to replicate the studies (Abraham & Michie, 2008) and also if there is a need to systematically analyse it makes is difficult to do so. BCTs are theory based as Abraham and Michie (2008) developed a taxonomy of behaviour change to be applied to variety of behaviour and as it is known that each behaviour has its own set of theories to make effective interventions. Although some articles by Michie et al. (2012) were about BCTs did not talk about the relation of theory to the behaviour but mentioned about creating more theoretically robust interventions.

Identifying the theories for each behaviour and learning from previous research will enable the researchers to develop more effective tool combining those BCTs (Michie et al., 2012). In order to achieve such results, the researchers call for more research in the area of BCT with a detailed explanation of BCTs provided (Abraham & Michie, 2008). Abraham and Michie (2008) suggested the interventions need to be reported with common terminology so that the further evaluation of the interventions

can be performed. Abraham and Michie (2008) drew lines between two components of interventions, theory and behaviour.

Currently there is a concern of interventions as they are not reported in detail so makes it difficult to replicate, as Michie et al. (2012) suggested if we knew the effective ones we would be able to combine 2 or 3 of them to make one effective intervention. The research by Michie et al. (2012) highlighted the gap in the literature that there was a need for more identification of BCT so that it could be used for making up more intensive interventions. Although Michie et al., (2014) suggested attention should be paid as sometimes it was not when the behaviour but related behaviour is targeted can make the intervention easy to target the main behaviour. Cautions should be taken as the intervention can be harmful if it is not carefully assessed before delivery (Michie et al., 2014; Abraham & Michie, 2008). In addition, while conducting formative assessment culture and environment should be taken into account. Current research can serve as formative assessment which included points of consideration mentioned above: theory, culture, environment.

When thinking of the behaviour change, thinking from the individual perspective will not make much change as the individual belong to certain culture and social environment which is intervening with his choices of behaviour. In addition to interventions on attitude and belief change to introduce healthier behaviors currently there is research concentrating on macro level for example on introducing policies (Ftzgerald et al., 2016). Research by Ftzgerald et al. (2016) reported effectiveness of population level alcohol policies in reducing negative alcohol consequences. It also reported the changes in various negative consequences in male or female behaviour after certain alcohol related policy is introduced. For example, in relation drinking and

driving intervention targeting it would be useful in reducing drinking of males than females (Carpenter, 2004).

So far only qualitative studies were looking into micro and macro level of behaviour formation (Bonar et al., 2012; Michie et al., 2014; Van Wersch & Walker, 2009) and highlighting the elements of culture and society. The study by Cooke and French (2011) did quantitative investigation of TPB in relation to alcohol use in different contexts, bar and library. The authors added the timeframe, the results showed subjective norm was a better predictor of intention within a drinking context, attitude predicted intention in a distant event when compared with near future event. Context and timeframe had an affect subjective-norm and intention relationship. This study is a first study which provided evidence to predictive properties of TPB by introducing context and timeframe. Current research can serve as a formative assessment which included before mentioned points of consideration: theory, culture, environment.

11.9.1.1 Specific research questions. Focus groups also yielded social, personal and intrapersonal factors which is in interplay with each other forming the drinking activity (see section 8.5). Extra themes emerged during focus groups with members of staff e.g., under intervening conditions (intrapersonal) policies and procedures, spare time, knowledge about students' alcohol use was emerged. Under contextual conditions current economy, people and organisations involved communication came out to be effecting the behaviour. Gathered information from focus groups assisted in identifying the professionals and organisations which are directly involved in making difference in relation to the alcohol use and answer specific research questions set for focus groups study:

What are the policies and procedures within the university as regards alcohol?

What is the current practice and what are the interventions?

What are the challenges in enforcing alcohol policies?

How does the university promote sensible drinking?

What are the beliefs and knowledge about students' substance use?

What are the student safety concerns?

What communication improvements could be made between departments and the University to support both staff and students.

What are the action and policies suggested?

The information provided assists in establishing and understanding that multi-level behaviour which was previously mentioned in Com-B model. Com-B model divides the people involved e.g., front line workers, mid-level-management, senior management and the system context and looks into what opportunity each layer provides, motivation, behaviour and capability to intervene with the behaviour targeted (Michie et al., 2014). Based on the information obtained from focus groups the following figure was adapted to explain the drinking using COM-B model.

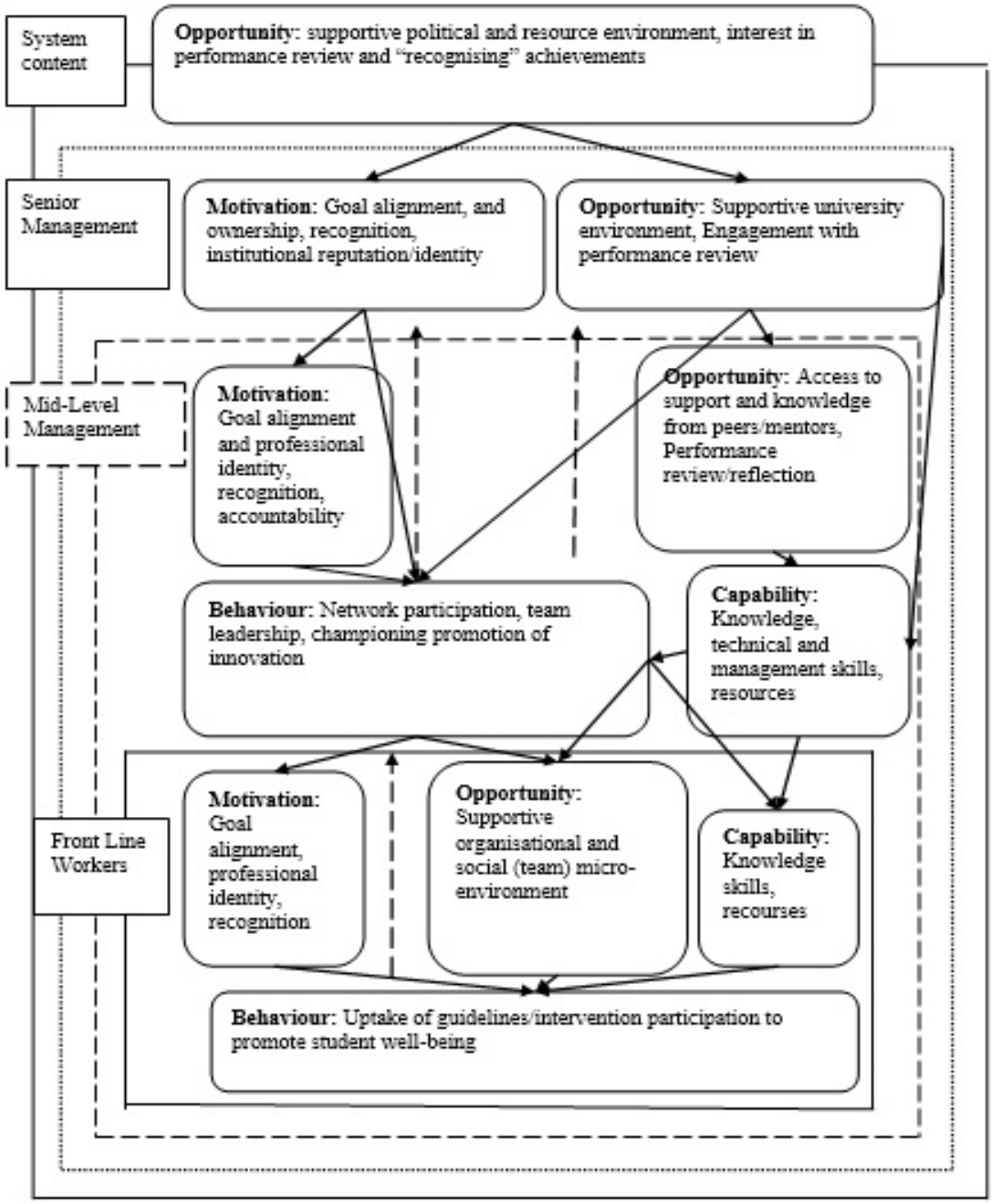

Figure 11.1. Using COM-B model to understand multi-level behaviours in a university context.

Reprinted from The Behaviour Change Wheel- A Guide to Designing Interventions (p. 131). By S. Michie, L. Atkins & R. West, 2014. Great Britain: Silverback Publishing. Copyright 2014 by S. Michie, L. Atkins and R. West.

Based on the COM-B model and a specific data for focus groups which was used to answer specific research questions of focus groups

Front line workers are: librarians, lecturers, security, staff of student halls of residence, security, staff of student bar and nightclub

Middle level management: wellbeing team, staff of student union, counsellors, managers of student halls of residence.

Senior management: Dean, Head of Departments, Deputy Vice Chancellor, Vice Chancellor

Each level has motivation perform health intervention, opportunities provided to conduct certain intervention, performance of the health intervention e.g., prevention alcohol intake of students and capability to perform the intervention (see Figure 11.1). In addition to COM-B model theoretical domains framework (TDF) have been developed to support intervention implementations. There are about 83 theories to be used in interventions but TDF offers 14 domains: knowledge, skills, memory, attention and decision processes, behavioural regulation, social role and identity, beliefs about capabilities, optimism, beliefs about consequences, intentions, goals and reinforcement, emotion environmental context and recourses, and social influences. By identifying where the members of staff in relation to before mentioned domains e.g., if they know anything about the phenomena and what they know, do they have skill to implement interventions, what recourses are available to support them, are they positive about the goals they are trying to achieve (Michie et al., 2014). Addressing these 14 domains according to the behaviour needs would make interventions successful.

11.9.1.2 Specific research questions are revisited.

What are the policies and procedures within university as regards alcohol?

In regards to the policies, a member of a student union team reported that the university only acts upon the complaint. Student halls of residence have their own procedures to follow. Alcohol policies in the bar seem to be directed to the students who are employed by the university night club and bar. For example, if they do not turn up for work they face disciplinary action. In regards to serving drinks, the person who had a lot to drink usually is not served alcohol. In addition, the drinks which are served do not cost less than a pound as it is agreed by local regulations (note, price limit is different to Bedford, a neighboring city). The bar and the nightclub are the members of a scheme called "Best Bar Man" and they follow the common rules (e.g., advertise soft drinks). University night club was reported to be open only once a week. The bar which is located in a university building is not serving its purpose because location of it, it is mostly used as a coffee shop.

What is the current practice and what are the interventions?

Student union and its wellbeing team seems to respond to an issue upon happening (e.g., sports student's CRB was not cleared as a result of his behaviour) after awareness raising was initiated by student union to inform about consequences of excessive alcohol use. Currently, alcohol agencies set up stools on a regular basis during fresher's week and enrollment week to inform students about the services available in the area.

What are the challenges in enforcing alcohol policies?

Alcohol was reported to be a personal choice. Members of staff only can interfere if there is a complaint about the inappropriate behaviour of a student as a result of overindulging. In relation to the awareness raising, there is not much university staff feels they can do as the messages they think are ignored.

How does the university promote sensible drinking?

The results of interviews and focus groups suggested that over the last several years no awareness raising campaign was organised except for the stalls set up during enrollment week informing about services in the area. During interviews students mentioned receiving no information about substance use. The messages were about encouraging joining Wednesday night in a night club. The staff of student halls of residence informed about the welcome packs they provide both parents and students with the information about the setting and polices.

What are the beliefs and knowledge about students' substance use?

It was cited during focus groups that 1% students have alcohol related problems. At the same time it was mentioned by another member of staff that the number of student with mental health problems has risen over last 2 years. In fact, currently 20% of the students are consuming alcohol excessively to the extent that it will be affecting their health in the future.

What are the student safety concerns?

The following safety concerns have been reported.

- There has been increase in student pre-loading
- There is a car in front of the student hall which sells cannabis to the student village residents'
- Smoking in the halls of residence frequently occurs to the extend the alarms needs to be switched off, as it is causing disturbance. Switching the alarms off would enable to detect real fire.
- There were newspaper reports and people's observations about cheap and illegal alcohol containing chemicals being sold in local shops.
- There is a concern about drinking alone in student halls of residence as it is leading to excessive alcohol use and causing mental health issues
- Mental health issues have been reported to be risen over last 2 years from 2 cases to 10 in student hall of residence
- Students in Bedford campus do not have night club on site and there is a concern them coming back home safe after the night out
- There were attempts of making own drugs by some students putting other students at risk
- There was abuse towards members of staff in student halls by drunk students
- Damage to the property is caused (especially kitchen area)
- Unauthorised people in the premises
- Noise
- One student was mugged while walking drunk in the evening and one student died as a result of excessive consumption

What communication improvements could be made between departments and the University to support both staff and students?

Student hall would like to have more involvement from university authorities/ as it was reported the authorities only come to student halls of residence when there is an issue of certain degree. Although two setting are run by two different companies the involvement would make difference in student village

It would be preferable to improve communication by sharing what is happening on different sites (department) and act accordingly in the best of interest of students.

Communication needs to be improved. If there are any messages sent it needs to be done in both settings. The University and student halls of residence need to show that they are working in interest of students and would like to improve the wellbeing of students.

More informative and preventive messages addressing different audiences and tailored messages need to be sent.

What are the action and policies suggested?

Student halls of residence are introducing some new policies which are not around alcohol. The policy can be suggested to other departments, which organise student leisure time.

Safety of student in Bedford who are clubbing in town center needs to be dealt with

More activities /policies need to e.g., introduced to (things outside drinking) students' involvement with work, voluntary activities and other activities, which would be interest to students (targeting drinking indirectly)

It would be preferable to have funds released towards parties which are not based on the profit made from selling alcohol but on something different

During student nights at university night club it would be preferable to promote the event and make the events more appealing by inviting DJs and bands, but not concentrate on promotion of drinks.

It would be beneficial for the staff of student village to have mental health training as they are the ones who are dealing with it most and they reported not to be competent in handing the situation when they arise.

11.9.1.3 Recommendations for interventions and policies.

The table below is constructed based on the present and previous research findings and draws some recommendations for the interventions and policies which could be implemented to reduce alcohol consumption to safe limits (see Appendix E.1 for a complete Table 11.1).

Table 11.1
Recommended Interventions for Environmental Factors and Personal Factors of the Behaviour Execution

Influence / themes emerged during qualitative research	Research	Recommendations
Age Interview: age Focus groups: n/a	Early onset of alcohol use predicts later life alcohol abuse and dependence	Policy: introduce policies to minimise alcohol consumption or try to delay

		onset.
Year of study Interview: year of study Focus groups: course at university	First year students tend to drink more as they are trying to fit in	Policy: provide alcohol free socialising opportunities Intervention: Educate first year students about the risks of heavy consumption
Accessibility Interview: availability of a favourite drink Focus groups: accessibility	It creates opportunities to drink	Policy: introduce activities alcohol free, increase the price of alcohol, increase job opportunities for both paid and voluntary work, introduce internships.

11.9.1.4 Implications for university health professionals and student support services. The study can have implication for health professionals and student support services working within university. Health professional would be able to make a difference in organising the setting in a way to improve students' wellbeing at the university. The results showed the changes in behaviour could be achieved by tailoring the environment and creating healthy choices, by informing and educating, by effectively using all communication technologies to communicate health messages. Also, if there is a need to restrict certain behaviours, relevant policies can be introduced (Michie et al., 2014). Creating a supportive environment, which gives choice, confidence and trust to its member will be successful in promoting health messages and will make a difference.

11.9.1.5 Future directions and interventions. The way to bring research into practice is one of the main aims of Health Psychology (Ogden, 2012) The current research can be replicated and the tools can be used to provide consultancy for the universities to inform and advise key personal, health care professionals, members of wellbeing teams and student support services about students' alcohol use and misuse.

The quantitative data would provide with statistical information on the alcohol use and would help university staff find significant factors within their setting. The variables showed to be significantly contributing to student's alcohol use could be used in interventions, or targeted in the sessions when students start their studies.

As it was clear from the focus groups that the factors may differ according to the setting or the part of the UK the university is located. For example, availability of jobs in the area, entertainment, easy access to them would be related of student's decision to drink.

Interviews with 23 participants and two focus groups even with a rather small sample size (N-7) provided a rich data to identify contextual factors and intervening factors within alcohol use. The information can be used to target particular groups of students and try to prevent incidents from happening either it is health related or damage caused to university property or preventing students to become victims of the crime. The messages could be tailored according to the group, for example excessive alcohol use of sport students is leading for them to stop their course as it is affecting their career by damaging their reputation. Which would mean they would not be able to get CRB check clearance in case they would like to work with children. Another example, students who live in the student halls of residence tend to drink more as most of them are 1st year students and have a different attitude towards their place of living than their peers, who live in private accommodation.

11.9.1.6 Implication for policy makers. This study pointed out certain areas which could be addressed in a local authority level, which would be beneficial for the students. For example, creating more job opportunities for students in town, organising entertainment in the area for students to have better quality of life. Moreover, the authorities might think of the ways to improve town safety, provide safe town to live in

for the students. It would be desirable for the local authorities, organisations and entertainment provider in the area to be collaborating with the university. For example, local mental health services might provide training to the student halls of residence staff, for them to competently handle mental health issues they face with students as a result of students' excessive alcohol or drug use.

11.9.2 Recommendation and limitations of the research

11.9.2.1 Recommendations for future research. Drawing on the key findings, the strengths and limitations to the study outlined above, this section will provide recommendations to be considered in future research. The research approach can be replicated to explore about drinking among different populations of different settings and provide a base for setting up interventions within those environments. Also, inclusion of individuals with identified alcohol problems will strengthen the research, who are selected based on validated clinical scales.

In relations to statistical methods used, it would be preferable to use path analysis to identify mediation and moderation between variables. In relation to qualitative research, it could be aimed at exploring causal effects, by conducting in depth analysis.

The difficulties participants are having answering to TPB questionnaire needs to be addressed with future research, as recent literature suggests that questions exploring some of the variables is not addressing the variables e.g., perceived behavioural control.

11.9.2.2 Limitations of the study. Current research used self-report measures. Although it is prospective study the follow up period showed to be appropriate for the participants to remember past behaviour. As previous research suggests it is preferable

to ask questions about the information no longer than 6 months after the event (Bennet et al., 2013).

The sample for the quantitative research was randomly recruited or stratified which would mean generalisability is not defined. Sample size for focus groups was rather small (N=7), as saturation for qualitative research is usually reached with min 25 participants (Maycut & Morehouse, 1994), though Edmunds (1999) recommends to use minimum of two sets of focus groups. Smaller groups are preferred if the topic is emotional, as small groups provide high level of participation (Morgan, 1992). In addition, small groups are easy for the moderator to manage during discussion of emotional topics (Morgan, 1996). Having a bigger sample for qualitative research would allow exploring causal effects (Maxwell, 2004).

There has been a lot of debate about the validity of self- report (Midanic, 1988; Del Boka & Darkes, 2003). The methods of assessing alcohol use varied from one study to another. Some used self-report questionnaires (Caudwell & Hagger 2015), others used it in combination with blood concentration and breathalyser (Kraus et al., 2005).

Literature shows that environment / context where research is conducted affect the results of the study. For example, when self-report questionnaires were used for alcohol research, different results were achieved by data collection in the library and in the bar. In addition, the ability accurately report alcohol consumption is dependent on human perception, cognition and memory (Del Boca & Darkes, 2003).

Another factor was social desirability factor affecting to the self-report either by over reporting or underreporting depending to the setting. For example, in medical setting it would be underreporting (Gache et al., 2005) and in college and university over reporting. There were differences found in female or male reporting, females were reported to be under reporting their alcohol use (Wechsler et al., 1995).

Del Boca and Darkes (2003) identified factors which influence alcohol self-report to be social contextual factors, respondent characteristics and task attributes. The authors gave example of research with contradicting results in relation to providing anonymity and confidentiality of the participants and argue there is not much evidence (and practical significance) that provision of anonymity and confidentiality make any changes in reporting alcohol consumption, but the willingness to respond.

The factors which are influencing reporting alcohol use with the use of self-report measures seem to depend on various factors: setting, participants, task attributes. Although the validity of self-report measures is arguable as research suggests (Del Boca & Darkes, 2003) it is still providing acceptable reliability and validity and offers inexpensive as well as non-intrusive way of collecting data. Del Boca and Darkes (2003) mentions that the best way to improve the validity and minimise bias is to improve the measures and considering the contextual situations in which data is collected.

11.9.3 Contribution to knowledge. This study has contributed to the existing literature that focuses on identifying significant variables predicting alcohol use among university students. Firstly, the research conducted was mixed methods, there has been no longitudinal mixed methods conducted exploring student's alcohol use, in which interviews and focus groups have been adopted.

Secondly, the research provides a framework for consultancies to be conducted on alcohol consumption within universities. It can be used in combination with COM-B model developed by Michie et al. (2014) for developing effective interventions on the behaviour.

Thirdly, the models which have been drawn on using the components of TPB, PWM, SDT and social learning theory have not been researched previously. The study

provides justification and confirmation to the previous research in the area as well as adds more elements and explores new significant variables contributing to the behaviour.

Fourthly, in regards to qualitative research, the conditional matrix was previously from the perspective of people who drink alcohol (Van Wersch & Walker, 2009). The present study adds more to the knowledge by adding extra themes, which predict behaviour formation within university setting. It also reports other environmental variables reported by members of staff based on their experience and observations of students.

11.9.4 Endnote. The current research attempts were made to investigate drinking behaviour of students and identify contributing factors.

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Appendix A

A.1 Oral briefing

form

Oral Briefing Script

Predicting alcohol consumption among university students using Theory of Planned Behaviour (TPB), Prototype Willingness Model (PWM), and Self Determination Theory (SDT).

Thank you for your willingness to participate in the study. It is about alcohol consumption and the purpose is to identify the reasons why people consume alcohol and what contributes to their choice of alcohol consumption. Especially we are aiming to examine the types of motivation involved to predict the behaviour. If you are interested in the research you can read the following articles on information sheet.

In case you are interested in the result of the study feel free to contact me or my supervisor.

If you feel distressed while completing a questionnaire or participating in the interview you can contact support services of the university, student support reception and in case you have concerns about your drinking you can call national helpline. You can find contact information in the information sheet I have given to you.

The information you provide will be kept confidential. If the study is published the results will be published anonymously as a group data. You can withdraw from the research at any time. Also, you can withdraw your data after the participation.

NOTE:

Signing this form commits you to present the "cleared" information during the oral debriefing process.

* * * * *

A.2 Information sheet for oral briefing form

Information sheet for oral briefing

Predicting alcohol consumption among university students using Theory of Planned Behaviour (TPB), Prototype Willingness Model (PWM), and Self Determination Theory (SDT).

*****

If you are interested in this area of research, you may wish to read the following references:

Deci, E. & Ryan, R. (1985). *Intrinsic motivation and self determination in human behaviour.* New York: Plenum Press.

Hagger, M., Lonsdale, A., Hein, V., Koka, A., Lintunen, T., Pasi, H., Lindwall, M., Rudolfsson, L. & Chatzisarantis, N. (2012). Predicting alcohol consumption and binge drinking in company employees: an application of planned behaviour and self-determination theories. *British Journal of Health Psychology*, 17, 379-407.

Johnston,K. & White, K. (2003). Binge drinking: a test of the role of group norms in the theory of planned behaviour. *Psychology and Health*, 18 (1), 63-77.

If you feel distressed while completing a questionnaire or during an interview and you would like to speak to someone about your thoughts please contact one of the following:

Contact details

Support Services	sid@beds.ac.uk
Student Support Reception	01582489622

If you have any concerns about your drinking habits please call

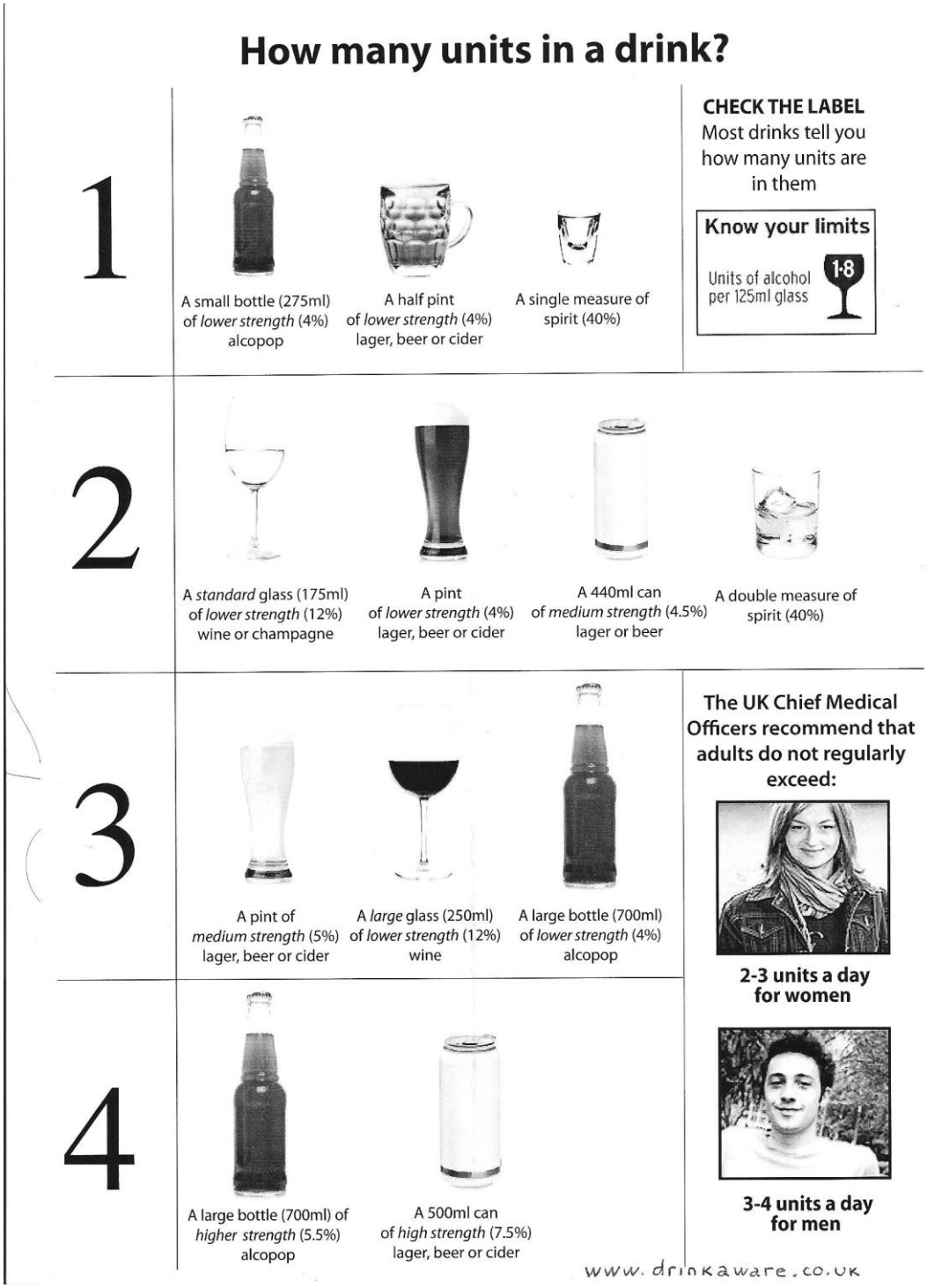
Drinkline	08889178282

*****

If you have any questions, concerns and complaints about this research, please feel free to contact, Professor Andy Guppy, Psychology Department, 01582489329 and e mail: andy.guppy@beds.ac.uk.

Thank you very much for participation!

A.3 Alcohol unit information sheet



A.4 Consent form

Informed Consent Form

We would like you to participate in the research, which will investigate different factors, especially types of motivation, involved in students' alcohol consumption. In case you would like to take part in the research, it will take 30 minutes of your time. We will also ask you to complete the questionnaire again between now and four months' time. There will not be any risks involved in this study.

Sometimes participation in research can lead to distress. If any distress occurs please contact research supervisor andy.guppy@beds.ac.uk, Student Guidance & Support Services on sid@beds.ac.uk or telephone student support reception on 01582489622. If you have any concerns about your drinking, you can call National helpline services –Drinkline on 0800 917 8282.

The participation is voluntary. You can withdraw from the study at any time you wish and it will not affect your grades. You can also request for a withdrawal of your data after participation. All the information you provide us will be kept confidential.

If you have any questions please contact us

Andy Guppy	Dilshoda Sharipova
andy.guppy@beds.ac.uk	dilshoda.sharipova@beds.ac.uk

Please read the following statements carefully and tick accordingly.

I am aware this is a voluntary participation	□
I understand that I have the right to withdraw from this study	□
I have been informed about the purpose of this research project in the information sheet	□
I understand and believe that my confidentiality will be maintained	□
I give consent for the data I share on the questionnaire to be used for research reasons.	□

Please provide information below to assist us to match the data collected between now and 4-month time.

What is the name of the first school you attended? _____

What is your city of birth? _____

What month were you born? _____

What is your star sign? _____

A.5 Questionnaire

Section 1: Statistical Information The first part of this questionnaire is to gather data for STATISTICAL COMPARISON ONLY

PLEASE REPLY TO ALL THE ITEMS.

ITEMS	COMPLETE BOX
What is your **gender?**	[ ] Male [ ] Female
What is your **age?**	_____ yrs
What is your current **domestic status?** *(Tick a box)*	[ ] Married (or cohabiting) [ ] Not married or cohabiting (but in a steady relationship) [ ] Divorced or Separated [ ] Widowed [ ] Single
Do you have any **dependent children?** *(If **YES** please specify how many)*	[ ] Yes [ ] No No. of dependent children:.....
In terms of educational qualifications :-	
a. How many GCSE's / 'O' levels (or equivalent) do you have at grades A-C.	
b. What subjects did you **pass** at 'A' level?	
What **course** are you doing at the university?	
What **year** are you in?	
Do you have a job **outside of college hours?**	[ ] Yes [ ] No
If yes what is your **job title?**	.....
Is this **part-time** or **full-time?**	[ ] Full-time [ ] Part-time
What are your **parents' occupations**?	Father..... Mother.....
What is your **ethnic origin?**	**[ ]Caucasian [ ] Afro-Caribbean** **[ ] Asian [ ] Oriental [ ] Other**
Do you have a **practising religion?** *If **YES** please specify which religion)*	[ ] Yes [ ] No Religion:.....

Section 2.

The following questions concern your images of people who drink and yourself. What we are interested in here are your ideas about typical members of different groups. For example, we all have ideas about what typical movie stars are like or what the typical grandmother is like. When asked, we could describe one of these images- we may say that the typical movie star is pretty or rich, or that the typical grandmother is sweet and frail. We are not saying that all movie stars or all grandmothers are exactly alike, but rather that many of them share certain characteristics.

Please read the adjectives and rate EACH LINE according to your image of these people and yourself.

		Not at all						Extremely
How would you describe the typical adult of your age **who regularly engages in binge drinking**? ***BINGE DRINKING** is consuming 7 or more units on a single occasion.* ***A UNIT** of alcohol is about one half pint of normal strength beer or lager or cider or one small glass of wine or a single shot of spirits.*	**Smart**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
	Confused	1	2	3	4	5	6	7
	Popular	**1**	**2**	**3**	**4**	**5**	**6**	**7**
	Immature	1	2	3	4	5	6	7
	Cool	**1**	**2**	**3**	**4**	**5**	**6**	**7**
	Self-confident	1	2	3	4	5	6	7
	Independent	**1**	**2**	**3**	**4**	**5**	**6**	**7**
	Careless	1	2	3	4	5	6	7
	Unattractive	**1**	**2**	**3**	**4**	**5**	**6**	**7**
	Dull (boring)	1	2	3	4	5	6	7
	Considerate	**1**	**2**	**3**	**4**	**5**	**6**	**7**
	Self-centred	1	2	3	4	5	6	7

	Very likable						Very dislikeable
How likeable or dislikeable do you think the type of person of your age **who regularly engages in binge drinking** would be?	1	2	3	4	5	6	7

	Not at all similar						Very similar
How similar do you think you are to that typical person?	1	2	3	4	5	6	7

Section 3. This section is about your attitude towards engaging in a **BINGE DRINKING SESSION** in the next 2 weeks. ***Binge drinking is consuming 7 or more units on a single occasion.***
Please circle a box, which describes it best.

1. Engaging in a binge drinking session in the next 2 weeks would be PLEASE RATE EACH ADJECTIVE	**Bad**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**Good**
	Harmful	1	2	3	4	5	6	7	Beneficial
	Pleasant	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**Unpleasant**
	Enjoyable	1	2	3	4	5	6	7	Unenjoyable
	Healthy	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**Unhealthy**
2. Most people who are important to me would approve/disapprove of me engaging in a binge drinking session in the next 2 weeks.	Approve	1	2	3	4	5	6	7	Disapprove
3. People who are important to me think I should/should not engage in a binge drinking session in the next two weeks.	**Should**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**Should not**
4. If I wanted to, engaging in a binge drinking session in the next 2 weeks would be easy / difficult	Easy	1	2	3	4	5	6	7	Difficult
5. How certain are you that you could engage in a binge drinking session in the next 2 weeks.	**Not at all certain**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**Strongly certain**
6. How confident are you that you could engage in a binge drinking session in the next 2 weeks?	Not at all confident	1	2	3	4	5	6	7	Strongly confident
7. How much control do you have over whether or not you engage in a binge drinking session in the next 2 weeks?	**Definitely no control**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**Definitely I have control**
8. Do you intend to engage in a binge drinking session in the next 2 weeks?	Definitely	1	2	3	4	5	6	7	Definitely Not
9. I intend to engage in a binge drinking session in the next 2 weeks.	**Definitely not**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**Definitely**
10. How much will factors outside your control influence whether or not you engage in a binge drinking session in the next 2 weeks?	Not at all	1	2	3	4	5	6	7	Definitely will
11. How likely is it that you will engage in a binge drinking session in the next 2 weeks?	**Extremely unlikely**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**Extremely likely**

12. If I wanted to, I could easily engage in a binge drinking session in the next 2 weeks.	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree no disagree	Slightly agree	Moderately agree	Strongly agree
13. I feel in complete control over whether or not I engage in a binge drinking session in the next 2 weeks.	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
14. It is up to me whether or not I engage in a binge drinking session in the next 2 weeks	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
15. Whether or not I engage in a binge drinking session in the next 2 weeks is under my control.	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
16. I will engage in a binge drinking session in the next 2 weeks.	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree

Section 4. Because alcohol use can affect your health and can interfere with certain medications and treatments, it is important that we ask some questions about your use of alcohol. Your answers will remain confidential so please be honest. Please circle the box that best describes your answer to each question.

ITEMS					
1. How often do you have a drink containing alcohol?	**Never**	**Monthly or less**	**2-4 times per month**	**2-3 times per week**	**4 or more times per week**
2. How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 -9	10 or more
3.a How often do you have 6 or more drinks on one occasion?	**Never**	**Less than monthly**	**Monthly**	**Weekly**	**Daily or almost daily**
3.b How often do you have 8 or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
4. How often, during the last year, have you found that you were not able to stop drinking once you had started?	**Never**	**Less than monthly**	**Monthly**	**Weekly**	**Daily or almost daily**
5. How often, during the last year, have you failed to do what normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
6. How often, during the last year, have you needed a drink in the morning to get yourself going after a heavy drinking session?	**Never**	**Less than monthly**	**Monthly**	**Weekly**	**Daily or almost daily**
7. How often, during the last year, have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
8. How often, during the last year, have you been unable to remember what happened the night before because you had been drinking?	**Never**	**Less than monthly**	**Monthly**	**Weekly**	**Daily or almost daily**
9. Have you or someone else been injured as a result of your drinking?	No	Yes but not in the last year	Yes during the last year		
10. Has a relative, friend, or doctor been concerned about your drinking or suggested you cut down?	**No**	**Yes but not in the last year**	**Yes during the last year**		

Section 5. This section is concerned with how you GENERALLY cope with problems in YOUR LIFE.

1-Never	2- Rarely	3-Sometimes	4-Often	5-Always

ITEMS	CIRCLE YOUR CHOICE				
1. I try to change the situation to get what I want.	**1**	**2**	**3**	**4**	**5**
2. I make an effort to change my expectations.	1	2	3	4	5
3. I try to keep myself from thinking about the problem.	**1**	**2**	**3**	**4**	**5**
4. I try to let off steam.	1	2	3	4	5
5. I focus my efforts on changing the situation.	**1**	**2**	**3**	**4**	**5**
6. I tell myself the problem was unimportant.	1	2	3	4	5
7. I try to turn my attention away from the problem.	**1**	**2**	**3**	**4**	**5**
8. I try to relieve my tension somehow.	1	2	3	4	5
9. I work on changing the situation to get what I want.	**1**	**2**	**3**	**4**	**5**
10. I try to adjust my expectations to meet the situation.	1	2	3	4	5
11. I tell myself the problem was not so serious after all.	**1**	**2**	**3**	**4**	**5**
12. I try to get it off my chest.	1	2	3	4	5
13. I try to adjust my own standards.	**1**	**2**	**3**	**4**	**5**
14. I tell myself that the problem was not such a big deal after all.	1	2	3	4	5
15. I try to avoid thinking about the problem.	**1**	**2**	**3**	**4**	**5**

Section 6. This section is about your MOTIVES to drink alcohol within **safe limits (less than 4 units per day for males, less than 3 units per day for females)**.

ITEM *I keep my alcohol drinking within safe limits because…*	NOT AT ALL TRUE			VERY TRUE
1. I enjoy keeping my alcohol drinking within safe limits	**1**	**2**	**3**	**4**
2. Keeping my alcohol drinking within safe limits is fun	1	2	3	4
3. Drinking within safe limits makes me feel good	**1**	**2**	**3**	**4**
4. I get satisfaction from keeping my alcohol drinking within safe limits	1	2	3	4
5. I value the benefits of keeping my alcohol intake within safe limits	**1**	**2**	**3**	**4**
6. I appreciate the advantages of drinking within safe limits	1	2	3	4
7. I value the rewards that sensible drinking provides	**1**	**2**	**3**	**4**
8. It is important to me to keep my drinking within safe limits	1	2	3	4
9. I feel ashamed when I do not keep my alcohol drinking within safe limits	**1**	**2**	**3**	**4**
10. I feel proud of myself when I keep my alcohol drinking within safe limits	1	2	3	4
11. otherwise I would feel bad about myself	**1**	**2**	**3**	**4**
12. it bothers me when I don't	1	2	3	4
13. other people say I should	**1**	**2**	**3**	**4**
14. of public health campaigns	1	2	3	4
15. that's what I'm supposed to do	**1**	**2**	**3**	**4**
16. I'll get into trouble if I don't	1	2	3	4
17. It is not clear anymore; I sometimes ask myself if it is good for me	**1**	**2**	**3**	**4**
18. I used to have good reasons, but now I am asking myself if I should continue	1	2	3	4
19.Honestly, I don't know; I have the impression that I'm wasting my time	**1**	**2**	**3**	**4**

Section 7. Alcohol Expectancies. This section is concerned with what EFFECT YOU EXPECT drinking alcohol to have. Please answer the questions by circling a box with answers.

ITEMS				
1. Drinking makes the future seem brighter	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
2. Having a few drinks is a nice way to celebrate special occasions	**STRONGLY AGREE**	**AGREE**	**DISAGREE**	**STRONGLY DISAGREE**
3. After a few drinks I am more sexually responsive	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
4. If I'm feeling restricted in any way, a few drinks make me feel better	**STRONGLY AGREE**	**AGREE**	**DISAGREE**	**STRONGLY DISAGREE**
5. If I have a couple of drinks it is easier to express my feelings	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
6. Alcohol enables me to fall asleep more easily	**STRONGLY AGREE**	**AGREE**	**DISAGREE**	**STRONGLY DISAGREE**

Section 8. General Feelings

(a) Try to decide which response option below best represents your USUAL WAY of acting or feeling. There are no right or a wrong answer, your IMMEDIATE REACTION is what we want.

Please reply to all the items

Circle your response choice for each item on the table:

Items	Almost never	Quite seldom	Quite often	Almost always
1. Do you like plenty of excitement and bustle around you?	1	2	3	4
2. Does your mood go up and down?	**1**	**2**	**3**	**4**
3. Are you rather lively?	1	2	3	4
4. Do you feel "just miserable" for no good reason?	**1**	**2**	**3**	**4**
5. Do you like mixing with people?	1	2	3	4
6. When you get annoyed do you need someone friendly to talk to?	**1**	**2**	**3**	**4**
7. Would you call yourself happy-go-lucky?	1	2	3	4
8. Are you troubled about feelings of guilt?	**1**	**2**	**3**	**4**
9. Can you let yourself go and enjoy yourself a lot at a lively party?	1	2	3	4
10. Would you call yourself tense or "highly strung"?	**1**	**2**	**3**	**4**
11. Do you like practical jokes?	1	2	3	4
12. Do you suffer from sleeplessness?	**1**	**2**	**3**	**4**

Section 9. Please answer each question by circling. There are no right or wrong answers and no trick questions. Work quickly and do not think too long about the exact meaning of the questions.

	Rarely/Never	Occasionally	Often	Almost Always
1. I act on impulse.	**1**	**2**	3	4
2. I act on the spur of the moment.	1	2	3	4
3. I do things without thinking.	**1**	**2**	3	4
4. I say things without thinking.	1	2	3	4
5. I buy things on impulse.	**1**	**2**	3	4

Section 10. Alcohol Consumption and Coping. This section is concerned with the USE OF DRINKING ALCOHOL as a means of coping with pressure.

PLEASE REPLY TO ALL THE ITEMS

Circle your response choice for each item on the table:

ITEMS *I DRINK .....*	Almost never	Usually not	Occasionally	Usually	Almost always
1. To forget my worries.	**1**	**2**	**3**	**4**	**5**
2. Because it is exciting.	1	2	3	4	5
3. To be sociable.	**1**	**2**	**3**	**4**	**5**
4. Because I feel more self-confident or sure of myself.	1	2	3	4	5
5. Because it helps me when I am feeling nervous.	**1**	**2**	**3**	**4**	**5**
6. Because it is fun.	1	2	3	4	5
7. Because it makes social gathering more enjoyable.	**1**	**2**	**3**	**4**	**5**
8. Because it helps me when I am feeling depressed.	1	2	3	4	5
9. To fit in with a group I like.	**1**	**2**	**3**	**4**	**5**
10. So I won't feel left out.	1	2	3	4	5

Section 11. Well-being in General Life (General Health Questionnaire)

We would like to know how your health has been in GENERAL, OVER THE PAST FEW WEEKS. Remember that we want to know about PRESENT AND RECENT complaints, NOT those you had in the past. **PLEASE REPLY TO ALL THE ITEMS.**

Circle your response choice for each item on the table:

HAVE YOU RECENTLY:-	**CIRCLE YOUR CHOICE**			
1. Been able to concentrate on whatever you are doing?	Better than usual	Same as usual	Less than usual	Much less than usual
2. Been losing confidence in yourself?	**Not at all**	**No more than usual**	**Rather more than usual**	**Much more than usual**
3. Felt that you were playing a useful part in things?	More so than usual	Same as usual	Less useful than usual	Much less usual
4. Lost much sleep over worry?	**Not at all**	**No more than usual**	**Rather more than usual**	**Much more than usual**
5. Felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less capable
6. Felt constantly under strain (excessive pressure)?	**Not at all**	**No more than usual**	**Rather more than usual**	**Much more than usual**
7. Been able to face up to your problems?	More so than usual	Same as usual	Less able than usual	Much less able
8. Felt that you couldn't overcome your difficulties?	**Not at all**	**No more than usual**	**Rather more than usual**	**Much more than usual**
9. Been able to enjoy your normal day-to-day activities?	More so than usual	Same as usual	Less so than usual	Much less than usual
10. Been feeling unhappy and depressed?	**Not at all**	**No more than usual**	**Rather more than usual**	**Much more than usual**
11. Been feeling reasonably happy all things considered?	More so than usual	About same as usual	Less so than usual	Much less than usual
12. Been thinking of yourself as a worthless person?	**Not at all**	**No more than usual**	**Rather more than usual**	**Much more than usual**

Section 12. This section is about your WILLINGNESS TO DRINK alcohol.

Imagine the following situations. You are out with some friends on a Saturday evening and have already consumed quite a number of alcoholic drinks. You have the impression that you have had enough to drink. It is about midnight and someone having a birthday is paying for more drinks. Would you:

	Not at all willing						Very willing
Have 1 or two more drinks	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Drink enough to get drunk	1	2	3	4	5	6	7
How willing would you be to say "No thanks"?	**1**	**2**	**3**	**4**	**5**	**6**	**7**

Section 13. The section is about your ALCOHOL CONSUMPTION. Please answer the questions below. Please use information sheet provided.

How many days in the previous week did you drink alcohol?

_____

What was the most number of units you consumed in single occasion within last week?

_____

How many times within the last 6 months have you consumed 7 or more units on one occasion?

_____

If you would like to take part in further research and in a prize draw, please write your e-mail address in a separate sheet provided.

This is the end of the questionnaire.

Thank you for your participation.

Appendix B

Table B.1
Explained Variance in Dependent Variables

Variable	R2
PBCtotal4	.086
Slfefficacy	.123
Subjnorm	.107
attitudetotal	.251
intentiontotal	.507
bingingrecoded	.211

Table B.2
Standardised Path Coefficients for Path Model

Parameter			Estimate (β)	P
attitudetotal	<---	intrinsic_motivation	-.156	.085
attitudetotal	<---	identified_regulation	-.163	.085
attitudetotal	<---	introjected_regulation	-.315	***
attitudetotal	<---	external_regulation	.142	.035
Subjnorm	<---	identified_regulation	.253	.013
Subjnorm	<---	intrinsic_motivation	.019	.846
Subjnorm	<---	introjected_regulation	.100	.252
Subjnorm	<---	external_regulation	-.034	.635
Slfefficacy	<---	intrinsic_motivation	-.071	.464
Slfefficacy	<---	identified_regulation	-.073	.473
Slfefficacy	<---	introjected_regulation	-.202	.021
Slfefficacy	<---	external_regulation	-.072	.317
PBCtotal4	<---	intrinsic_motivation	.132	.183
PBCtotal4	<---	identified_regulation	.062	.551
PBCtotal4	<---	introjected_regulation	-.091	.306
PBCtotal4	<---	external_regulation	-.287	***
intentiontotal	<---	attitudetotal	.422	***
intentiontotal	<---	subjnorm	-.115	.036
intentiontotal	<---	slfefficacy	.316	***
intentiontotal	<---	PBCtotal4	-.086	.062
				***

Table B.3
Explained Variance in Dependent Variables

Variable	R2
PBCtotal4	.086
Slfefficacy	.123
Subjnorm	.107
attitudetotal	.251
intentiontotal	.507
bingingrecoded	.211

Table B.4
Standardised Path Coefficients for Path Model

Parameter			Estimate (β)	P
attitudetotal	<---	intrinsic_motivation	-.156	.085
attitudetotal	<---	identified_regulation	-.163	.085
attitudetotal	<---	introjected_regulation	-.315	***
attitudetotal	<---	external_regulation	.142	.035
Subjnorm	<---	identified_regulation	.253	.013
Subjnorm	<---	intrinsic_motivation	.019	.846
Subjnorm	<---	introjected_regulation	.100	.252
Subjnorm	<---	external_regulation	-.034	.635
Slfefficacy	<---	intrinsic_motivation	-.071	.464
Slfefficacy	<---	identified_regulation	-.073	.473
Slfefficacy	<---	introjected_regulation	-.202	.021
Slfefficacy	<---	external_regulation	-.072	.317
PBCtotal4	<---	intrinsic_motivation	.132	.183
PBCtotal4	<---	identified_regulation	.062	.551
PBCtotal4	<---	introjected_regulation	-.091	.306
PBCtotal4	<---	external_regulation	-.287	***
intentiontotal	<---	attitudetotal	.422	***
intentiontotal	<---	subjnorm	-.115	.036
intentiontotal	<---	slfefficacy	.316	***
intentiontotal	<---	PBCtotal4	-.086	.062
				***

Table B.5
Explained Variance in Dependent Variables

Variable	R2
PBCtotal4	.086
Slfefficacy	.123
Subjnorm	.107
Attitudetotal	.251
intentiontotal	.507
pastbehaverecoded	.163

Table B.6
Standardised Path Coefficients for Path Model

Parameter	<---		Estimate (β)	P
attitudetotal	<---	intrinsic_motivation	-.156	.085
attitudetotal	<---	identified_regulation	-.163	.085
attitudetotal	<---	introjected_regulation	-.315	***
attitudetotal	<---	external_regulation	.142	.035
Subjnorm	<---	identified_regulation	.253	.013
Subjnorm	<---	intrinsic_motivation	.019	.846
Subjnorm	<---	introjected_regulation	.100	.252

Subjnorm	<---	external_regulation	-.034	.635
slfefficacy	<---	intrinsic_motivation	-.071	.465
slfefficacy	<---	identified_regulation	-.073	.473
slfefficacy	<---	introjected_regulation	-.201	.021
slfefficacy	<---	external_regulation	-.072	.315
PBCtotal4	<---	intrinsic_motivation	.132	.183
PBCtotal4	<---	identified_regulation	.062	.551
PBCtotal4	<---	introjected_regulation	-.091	.306
PBCtotal4	<---	external_regulation	-.287	***
intentiontotal	<---	attitudetotal	.419	***
intentiontotal	<---	subjnorm	-.120	.028
intentiontotal	<---	slfefficacy	.314	***
intentiontotal	<---	PBCtotal4	-.085	.065
pastbehaverecoded	<---	intentiontotal	.404	***

Table B.7
Explained Variance in Dependent Variables

Variable	R2
PBCtotal4	.086
Slfefficacy	.123
Subjnorm	.107
attitudetotal	.251
intentiontotal	.507
pastbehaverecoded	.163

Table B.8
Standardised Path Coefficients for Path Model

Parameter			Estimate (β)	P
attitudetotal	<---	intrinsic_motivation	-.156	.089
attitudetotal	<---	identified_regulation	-.163	.090
attitudetotal	<---	introjected_regulation	-.315	***
attitudetotal	<---	external_regulation	.142	.038
Subjnorm	<---	identified_regulation	.253	.017
Subjnorm	<---	intrinsic_motivation	.019	.868
Subjnorm	<---	introjected_regulation	.100	.256
Subjnorm	<---	external_regulation	-.034	.647
Slfefficacy	<---	intrinsic_motivation	-.071	.479
Slfefficacy	<---	identified_regulation	-.073	.487
Slfefficacy	<---	introjected_regulation	-.201	.018
Slfefficacy	<---	external_regulation	-.072	.301
PBCtotal4	<---	intrinsic_motivation	.132	.185
PBCtotal4	<---	identified_regulation	.062	.555
PBCtotal4	<---	introjected_regulation	-.091	.316
PBCtotal4	<---	external_regulation	-.287	***
intentiontotal	<---	Attitudetotal	.419	***
intentiontotal	<---	Subjnorm	-.120	.037
intentiontotal	<---	Slfefficacy	.314	***

intentiontotal	<---	PBCtotal4	-.085	.065
pastbehaverecoded	<---	Intentiontotal	.404	***

Table B.9
Explained Variance in Dependent Variables

VARIABLE	R2
identified_regulation	.092
Pwmtotal	.000
attitudetotal	.223
willingnesstwo	.267
Subjnorm	.116
PBCtotal4	.004
intentiontotal	.599
audit_consumption	.488

Table B.10.
Standardised Path Coefficients for Path Model

Parameters			Estimate (β)	P
identified_regulation	<---	pastbehaverecoded	-.304	***
attitudetotal	<---	identified_regulation	-.377	***
attitudetotal	<---	pastbehaverecoded	.192	.003
PBCtotal4	<---	identified_regulation	-.047	.538
Subjnorm	<---	identified_regulation	.268	***
PBCtotal4	<---	pastbehaverecoded	.030	.697
Subjnorm	<---	pastbehaverecoded	-.144	.040
willingnesstwo	<---	pwmtotal	.126	.058
willingnesstwo	<---	pastbehaverecoded	.255	***
willingnesstwo	<---	identified_regulation	-.158	.028
willingnesstwo	<---	attitudetotal	.228	.003
intentiontotal	<---	attitudetotal	.473	***
intentiontotal	<---	PBCtotal4	-.056	.232
intentiontotal	<---	subjnorm	-.123	.032
intentiontotal	<---	pastbehaverecoded	.160	.002
intentiontotal	<---	willingnesstwo	.248	***
audit_consumption	<---	identified_regulation	-.086	.160
audit_consumption	<---	intentiontotal	.307	***
audit_consumption	<---	attitudetotal	.041	.623
audit_consumption	<---	PBCtotal4	.005	.927
audit_consumption	<---	subjnorm	.016	.806
audit_consumption	<---	willingnesstwo	.211	.001
audit_consumption	<---	pwmtotal	.098	.082
audit_consumption	<---	pastbehaverecoded	.252	***

Tabel B.11
Explained Variance in Dependent Variables

Variable	R2
Expectancy	.066
alc_coping	-1.154
audit_consumption	.283
audit_problems	.370

Table B.12
Standardised Path Coefficients for Path Model

Parameters			Estimate (β)	P
expectancy	<---	gender	.011	.857
expectancy	<---	extraversion	.008	.904
expectancy	<---	neuroticism	-.168	***
expectancy	<---	impulsivity	-.159	.002
alc_coping	<---	expectancy	-1.738	***
alc_coping	<---	gender	.031	.742
alc_coping	<---	extraversion	-.048	.628
audit_consumption	<---	alc_coping	.417	***
audit_consumption	<---	neuroticism	.043	.484
audit_consumption	<---	gender	-.200	***
audit_consumption	<---	expectancy	-.121	.065
audit_problems	<---	audit_consumption	.391	***
audit_problems	<---	Gender	-.044	.371
audit_problems	<---	Impulsivity	.118	.036
audit_problems	<---	Expectancy	-.052	.409
audit_problems	<---	alc_coping	.159	.027
audit_problems	<---	Neuroticism	.124	.033

Table B.13
Explained Variance in Dependent Variables

Variable	R2
introjected_regulation	.047
Amotivation	.029
External_regulation	.004
intrinsic_motivation	.069
identified_regulation	.092
Pwmtotal	.114
Attitudetotal	.352
willingnesstwo	.288
Subjnorm	.159
PBCtotal4	.152
intentiontotal	.612

audit_consumption	.506	

Table B.14
Standardised Path Coefficients for Path Model

			Estimate (β)	P
identified_regulation	<---	pastbehaverecoded	-.304	***
intrinsic_motivation	<---	pastbehaverecoded	-.263	***
external_regulation	<---	pastbehaverecoded	-.064	.378
Amotivation	<---	pastbehaverecoded	.169	.019
introjected_regulation	<---	pastbehaverecoded	-.216	.002
Attitudetotal	<---	identified_regulation	-.117	.216
Attitudetotal	<---	pastbehaverecoded	.163	.008
Attitudetotal	<---	intrinsic_motivation	-.144	.102
Pwmtotal	<---	intrinsic_motivation	-.191	.026
Attitudetotal	<---	external_regulation	.065	.389
Pwmtotal	<---	external_regulation	.070	.426
Attitudetotal	<---	amotivation	.135	.046
Pwmtotal	<---	amotivation	.214	.005
Attitudetotal	<---	introjected_regulation	-.360	***
Pwmtotal	<---	introjected_regulation	-.164	
PBCtotal4	<---	identified_regulation	-.001	.072
Subjnorm	<---	identified_regulation	.205	.992
PBCtotal4	<---	pastbehaverecoded	.103	.059
Subjnorm	<---	pastbehaverecoded	-.140	.155
willingnesstwo	<---	pwmtotal	.125	.048
willingnesstwo	<---	pastbehaverecoded	.252	.060
willingnesstwo	<---	identified_regulation	-.155	***
willingnesstwo	<---	attitudetotal	.229	.030
PBCtotal4	<---	intrinsic_motivation	.094	.003
Subjnorm	<---	intrinsic_motivation	.008	.357
PBCtotal4	<---	external_regulation	-.155	.933
Subjnorm	<---	external_regulation	.069	.071
PBCtotal4	<---	amotivation	-.315	.419
Subjnorm	<---	amotivation	-.082	***
PBCtotal4	<---	introjected_regulation	-.006	.284
Subjnorm	<---	introjected_regulation	.113	.951
intentiontotal	<---	attitudetotal	.474	.250
intentiontotal	<---	PBCtotal4	-.055	***
intentiontotal	<---	subjnorm	-.122	.232
intentiontotal	<---	pastbehaverecoded	.157	.032
intentiontotal	<---	willingnesstwo	.247	.002

audit_consumption	<---	identified_regulation	-.084	***
audit_consumption	<---	intentiontotal	.306	.165
audit_consumption	<---	attitudetotal	.041	***
audit_consumption	<---	PBCtotal4	.005	.622
audit_consumption	<---	subjnorm	.016	.927
audit_consumption	<---	willingnesstwo	.211	.806
audit_consumption	<---	pwmtotal	.096	.001
audit_consumption	<---	pastbehaverecoded	.248	.085

Table B.15
Explained Variance in Dependent Variables

Variable	R2
introjected_regulation	.047
Amotivation	.029
external_regulation	.004
intrinsic_motivation	.069
identified_regulation	.092
Pwmtotal	.114
Attitudetotal	.352
willingnesstwo	.288
Subjnorm	.159
PBCtotal4	.152
intentiontotal	.612
audit_problems	.373

Table B.16
Standardised Path Coefficients for Path Model

			Estimate (β)	P
identified_regulation	<---	pastbehaverecoded	-.304	***
intrinsic_motivation	<---	pastbehaverecoded	-.263	***
external_regulation	<---	pastbehaverecoded	-.064	.378
Amotivation	<---	pastbehaverecoded	.169	.019
introjected_regulation	<---	pastbehaverecoded	-.216	.002
attitudetotal	<---	identified_regulation	-.117	.216
attitudetotal	<---	pastbehaverecoded	.163	.008
attitudetotal	<---	intrinsic_motivation	-.144	.102
Pwmtotal	<---	intrinsic_motivation	-.191	.026
attitudetotal	<---	external_regulation	.065	.389
Pwmtotal	<---	external_regulation	.070	.426
attitudetotal	<---	amotivation	.135	.046
Pwmtotal	<---	amotivation	.214	.005
attitudetotal	<---	introjected_regulation	-.360	***
Pwmtotal	<---	introjected_regulation	-.164	.072
PBCtotal4	<---	identified_regulation	-.001	.992
Subjnorm	<---	identified_regulation	.205	.059
PBCtotal4	<---	pastbehaverecoded	.103	.155

Subjnorm	<---	pastbehaverecoded	-.140	.048
willingnesstwo	<---	pwmtotal	.125	.060
willingnesstwo	<---	pastbehaverecoded	.252	***
willingnesstwo	<---	identified_regulation	-.155	.030
willingnesstwo	<---	attitudetotal	.229	.003
PBCtotal4	<---	intrinsic_motivation	.094	.357
Subjnorm	<---	intrinsic_motivation	.008	.933
PBCtotal4	<---	external_regulation	-.155	.071
Subjnorm	<---	external_regulation	.069	.419
PBCtotal4	<---	amotivation	-.315	***
Subjnorm	<---	amotivation	-.082	.284
PBCtotal4	<---	introjected_regulation	-.006	.951
Subjnorm	<---	introjected_regulation	.113	.250
intentiontotal	<---	attitudetotal	.474	***
intentiontotal	<---	PBCtotal4	-.055	.232
intentiontotal	<---	subjnorm	-.122	.032
intentiontotal	<---	pastbehaverecoded	.157	.002
intentiontotal	<---	willingnesstwo	.247	***
audit_problems	<---	identified_regulation	-.115	.096
audit_problems	<---	intentiontotal	.156	.097
audit_problems	<---	attitudetotal	-.043	.653
audit_problems	<---	PBCtotal4	-.325	***
audit_problems	<---	subjnorm	-.025	.739
audit_problems	<---	willingnesstwo	.191	.009
audit_problems	<---	pwmtotal	.051	.424
audit_problems	<---	pastbehaverecoded	.217	.001

Table B.17
Explained Variance in Dependent Variables

Variable	R2
introjected_regulation	.047
Amotivation	.029
external_regulation	.004
intrinsic_motivation	.069
identified_regulation	.092
Pwmtotal	.114
Attitudetotal	.352
willingnesstwo	.288
Subjnorm	.159
PBCtotal4	.152
intentiontotal	.612
audit_total	.499

Table B.18
Standardised Path Coefficients for Path Model

			Estimate (β)	P

identified_regulation	<---	pastbehaverecoded	-.304	***
intrinsic_motivation	<---	pastbehaverecoded	-.263	***
external_regulation	<---	pastbehaverecoded	-.064	.378
Amotivation	<---	pastbehaverecoded	.169	.019
introjected_regulation	<---	pastbehaverecoded	-.216	.002
Attitudetotal	<---	identified_regulation	-.117	.216
Attitudetotal	<---	pastbehaverecoded	.163	.008
Attitudetotal	<---	intrinsic_motivation	-.144	.102
Pwmtotal	<---	intrinsic_motivation	-.191	.026
Attitudetotal	<---	external_regulation	.065	.389
Pwmtotal	<---	external_regulation	.070	.426
Attitudetotal	<---	amotivation	.135	.046
Pwmtotal	<---	amotivation	.214	.005
Attitudetotal	<---	introjected_regulation	-.360	***
Pwmtotal	<---	introjected_regulation	-.164	.072
PBCtotal4	<---	identified_regulation	-.001	.992
Subjnorm	<---	identified_regulation	.205	.059
PBCtotal4	<---	pastbehaverecoded	.103	.155
Subjnorm	<---	pastbehaverecoded	-.140	.048
willingnesstwo	<---	pwmtotal	.125	.060
willingnesstwo	<---	pastbehaverecoded	.252	***
willingnesstwo	<---	identified_regulation	-.155	.030
willingnesstwo	<---	attitudetotal	.229	.003
PBCtotal4	<---	intrinsic_motivation	.094	.357
Subjnorm	<---	intrinsic_motivation	.008	.933
PBCtotal4	<---	external_regulation	-.155	.071
Subjnorm	<---	external_regulation	.069	.419
PBCtotal4	<---	amotivation	-.315	***
Subjnorm	<---	amotivation	-.082	.284
PBCtotal4	<---	introjected_regulation	-.006	.951
Subjnorm	<---	introjected_regulation	.113	.250
intentiontotal	<---	attitudetotal	.474	***
intentiontotal	<---	PBCtotal4	-.055	.232
intentiontotal	<---	subjnorm	-.122	.032
intentiontotal	<---	pastbehaverecoded	.157	.002
intentiontotal	<---	willingnesstwo	.247	***
audit_total	<---	identified_regulation	-.122	.049
audit_total	<---	intentiontotal	.238	.005
audit_total	<---	attitudetotal	-.002	.979
audit_total	<---	PBCtotal4	-.211	***
audit_total	<---	subjnorm	-.002	.974
audit_total	<---	willingnesstwo	.216	***
audit_total	<---	pwmtotal	.081	.157
audit_total	<---	pastbehaverecoded	.268	***

Table B.19
Explained Variance in Dependent Variables

Variable	R2
introjected_regulation	.047
Amotivation	.029
external_regulation	.004
intrinsic_motivation	.069
identified_regulation	.092
Pwmtotal	.114
Attitudetotal	.352
willingnesstwo	.288
Subjnorm	.159
PBCtotal4	.152
intentiontotal	.612
bingeamount	.453

Table B.20
Standardised Path Coefficients for Path Model

			Estimate (β)	P
identified_regulation	<---	pastbehaverecoded	-.304	***
intrinsic_motivation	<---	pastbehaverecoded	-.263	***
external_regulation	<---	pastbehaverecoded	-.064	.378
Amotivation	<---	pastbehaverecoded	.169	.019
introjected_regulation	<---	pastbehaverecoded	-.216	.002
Attitudetotal	<---	identified_regulation	-.117	.216
Attitudetotal	<---	pastbehaverecoded	.163	.008
Attitudetotal	<---	intrinsic_motivation	-.144	.102
Pwmtotal	<---	intrinsic_motivation	-.191	.026
Attitudetotal	<---	external_regulation	.065	.389
Pwmtotal	<---	external_regulation	.070	.426
Attitudetotal	<---	amotivation	.135	.046
Pwmtotal	<---	amotivation	.214	.005
Attitudetotal	<---	introjected_regulation	-.360	***
Pwmtotal	<---	introjected_regulation	-.164	.072
PBCtotal4	<---	identified_regulation	-.001	.992
Subjnorm	<---	identified_regulation	.205	.059
PBCtotal4	<---	pastbehaverecoded	.103	.155
Subjnorm	<---	pastbehaverecoded	-.140	.048
willingnesstwo	<---	pwmtotal	.125	.060
willingnesstwo	<---	pastbehaverecoded	.252	***
willingnesstwo	<---	identified_regulation	-.155	.030

willingnesstwo	<---	attitudetotal	.229	.003
PBCtotal4	<---	intrinsic_motivation	.094	.357
Subjnorm	<---	intrinsic_motivation	.008	.933
PBCtotal4	<---	external_regulation	-.155	.071
Subjnorm	<---	external_regulation	.069	.419
PBCtotal4	<---	amotivation	-.315	***
Subjnorm	<---	amotivation	-.082	.284
PBCtotal4	<---	introjected_regulation	-.006	.951
Subjnorm	<---	introjected_regulation	.113	.250
intentiontotal	<---	attitudetotal	.474	***
intentiontotal	<---	PBCtotal4	-.055	.232
intentiontotal	<---	subjnorm	-.122	.032
intentiontotal	<---	pastbehaverecoded	.157	.002
intentiontotal	<---	willingnesstwo	.247	***
bingeamount	<---	identified_regulation	-.182	.005
bingeamount	<---	intentiontotal	.240	.006
bingeamount	<---	attitudetotal	-.075	.396
bingeamount	<---	PBCtotal4	.088	.114
bingeamount	<---	subjnorm	.036	.604
bingeamount	<---	willingnesstwo	.171	.012
bingeamount	<---	pwmtotal	.096	.107
bingeamount	<---	pastbehaverecoded	.333	***

Table B.21
Explained Variance in Dependent Variables

Variable	R2
introjected_regulation	.047
Amotivation	.029
external_regulation	.004
intrinsic_motivation	.069
identified_regulation	.092
pwmtotal	.114
attitudetotal	.352
willingnesstwo	.288
subjnorm	.159
PBCtotal4	.152
intentiontotal	.612
frequencyrecoded	.307

Table B.22
Standardised Path Coefficients for Path Model

			Estimate (β)	P
identified_regulation	<---	pastbehaverecoded	-.304	***
intrinsic_motivation	<---	pastbehaverecoded	-.263	***
external_regulation	<---	pastbehaverecoded	-.064	.378
amotivation	<---	pastbehaverecoded	.169	.019

introjected_regulation	<---	pastbehaverecoded	-.216	.002
attitudetotal	<---	identified_regulation	-.117	.216
attitudetotal	<---	pastbehaverecoded	.163	.008
attitudetotal	<---	intrinsic_motivation	-.144	.102
pwmtotal	<---	intrinsic_motivation	-.191	.026
attitudetotal	<---	external_regulation	.065	.389
pwmtotal	<---	external_regulation	.070	.426
attitudetotal	<---	amotivation	.135	.046
pwmtotal	<---	amotivation	.214	.005
attitudetotal	<---	introjected_regulation	-.360	***
pwmtotal	<---	introjected_regulation	-.164	.072
PBCtotal4	<---	identified_regulation	-.001	.992
subjnorm	<---	identified_regulation	.205	.059
PBCtotal4	<---	pastbehaverecoded	.103	.155
subjnorm	<---	pastbehaverecoded	-.140	.048
willingnesstwo	<---	pwmtotal	.125	.060
willingnesstwo	<---	pastbehaverecoded	.252	***
willingnesstwo	<---	identified_regulation	-.155	.030
willingnesstwo	<---	attitudetotal	.229	.003
PBCtotal4	<---	intrinsic_motivation	.094	.357
subjnorm	<---	intrinsic_motivation	.008	.933
PBCtotal4	<---	external_regulation	-.155	.071
subjnorm	<---	external_regulation	.069	.419
PBCtotal4	<---	amotivation	-.315	***
subjnorm	<---	amotivation	-.082	.284
PBCtotal4	<---	introjected_regulation	-.006	.951
subjnorm	<---	introjected_regulation	.113	.250
intentiontotal	<---	attitudetotal	.474	***
intentiontotal	<---	PBCtotal4	-.055	.232
intentiontotal	<---	subjnorm	-.122	.032
intentiontotal	<---	pastbehaverecoded	.157	.002
intentiontotal	<---	willingnesstwo	.247	***
frequencyrecoded	<---	identified_regulation	-.064	.377
frequencyrecoded	<---	intentiontotal	.367	***
frequencyrecoded	<---	attitudetotal	-.144	.144
frequencyrecoded	<---	PBCtotal4	.098	.113
frequencyrecoded	<---	subjnorm	.051	.507
frequencyrecoded	<---	willingnesstwo	.015	.845
frequencyrecoded	<---	pwmtotal	.038	.568
frequencyrecoded	<---	pastbehaverecoded	.341	***

Table B.23
Explained Variance in Dependent Variables

Variable	R2
introjected_regulation	.047
amotivation	.029
external_regulation	.004
intrinsic_motivation	.069

identified_regulation	.092
pwmtotal	.114
attitudetotal	.352
willingnesstwo	.288
subjnorm	.159
PBCtotal4	.152
intentiontotal	.612
bingingrecoded	.453

Table B.24
Standardised Path Coefficients for Path Model

			Estimate (β)	P
identified_regulation	<---	pastbehaverecoded	-.304	***
intrinsic_motivation	<---	pastbehaverecoded	-.263	***
external_regulation	<---	pastbehaverecoded	-.064	.378
amotivation	<---	pastbehaverecoded	.169	.019
introjected_regulation	<---	pastbehaverecoded	-.216	.002
attitudetotal	<---	identified_regulation	-.117	.216
attitudetotal	<---	pastbehaverecoded	.163	.008
attitudetotal	<---	intrinsic_motivation	-.144	.102
pwmtotal	<---	intrinsic_motivation	-.191	.026
attitudetotal	<---	external_regulation	.065	.389
pwmtotal	<---	external_regulation	.070	.426
attitudetotal	<---	amotivation	.135	.046
pwmtotal	<---	amotivation	.214	.005
attitudetotal	<---	introjected_regulation	-.360	***
pwmtotal	<---	introjected_regulation	-.164	.072
PBCtotal4	<---	identified_regulation	-.001	.992
subjnorm	<---	identified_regulation	.205	.059
PBCtotal4	<---	pastbehaverecoded	.103	.155
subjnorm	<---	pastbehaverecoded	-.140	.048
willingnesstwo	<---	pwmtotal	.125	.060
willingnesstwo	<---	pastbehaverecoded	.252	***
willingnesstwo	<---	identified_regulation	-.155	.030
willingnesstwo	<---	attitudetotal	.229	.003
PBCtotal4	<---	intrinsic_motivation	.094	.357
subjnorm	<---	intrinsic_motivation	.008	.933
PBCtotal4	<---	external_regulation	-.155	.071
subjnorm	<---	external_regulation	.069	.419
PBCtotal4	<---	amotivation	-.315	***
subjnorm	<---	amotivation	-.082	.284
PBCtotal4	<---	introjected_regulation	-.006	.951
subjnorm	<---	introjected_regulation	.113	.250
intentiontotal	<---	attitudetotal	.474	***
intentiontotal	<---	PBCtotal4	-.055	.232

intentiontotal	<---	subjnorm	-.122	.032
intentiontotal	<---	pastbehaverecoded	.157	.002
intentiontotal	<---	willingnesstwo	.247	***
bingingrecoded	<---	identified_regulation	-.182	.005
bingingrecoded	<---	intentiontotal	.241	.006
bingingrecoded	<---	attitudetotal	-.076	.391
bingingrecoded	<---	PBCtotal4	.088	.113
bingingrecoded	<---	subjnorm	.036	.605
bingingrecoded	<---	willingnesstwo	.171	.012
bingingrecoded	<---	pwmtotal	.095	.107
bingingrecoded	<---	pastbehaverecoded	.333	***

B.25: Correlation table for time 1

									0
	Gend								
.	er								
	Age								
.		.12*							
	Freq								
.	uency	.11	06						
	Units								
.		.20*	.06	61**					
	Past								
.	binging	.15*	.13*	5**	62**				
	Audit								
.		.12*	.18**	52**	63**	50**			
	PWM								
.		.11	.03	08	14*	07	17**		
	Attit								
.	ude	.07	.07	23**	32**	33**	37**	34**	
	Subn								
.	orms	.01	12	.17**	.22*	.24*	.29**	.28**	.59**

0.	Slfeff icacy	05	.02	31**	34**	31**	33**	19**	5**	.4**	
1.	PBC	00	12	07	09	03	.21**	.1	.07	02	25**
2.	Inten tion	00	.14*	41**	45**	40**	54**	27**	66**	.5**	55**
3.	Probl em-focused	.04	01	04	.01	02	.10	.11	.17**	13	.05
4.	Acco mmodation coping	.02	.06	01	.02	1	.03	.01	.1	03	.17**
5.	Avoi dance coping	.09	.1	19	16*	22**	21	12	07	.03	0
6.	Tensi on reduction	12	.15*	02	10	04	04	.06	00	.02	.05
7.	Deva luation coping	.05	.11	06	13*	16*	15*	06	03	.02	0
8.	Intrin sic motivation	16*	08	.21**	.21**	.21**	.39**	.21**	.40**	27**	.29**
9.	Ident ified regulation	13*	03	.24**	.39**	.23**	.41**	.11	.43**	33**	.29**
0.	Introj ected regulation	11	01	.10	.27**	.21**	.21**	.17**	.44**	27**	.33**
1.	Exter nal regulation	05	.09	.07	.19**	.08	.01	01	.15*	12	23**
2.	Amot ivation	.03	.13*	1	05	16*	22**	21**	06	.03	.04
3.	Expe ctancy	.01	17*	.15*	.09	.08	.4**	.14*	.32**	23**	.25**
4.	Extra version	.01	01	12	18**	16*	08	25**	21**	.04	09
5.	Neur oticism	19**	.12	19**	09	2**	3**	07	21**	.11	11
6.	Impu lsivity	.0	.17	31**	36**	34**	3**	12	19**	01	18**

7.	Alc-coping	07	.21**	27**	32**	27**	55**	17**	33**	.19**	3**
8.	GHQ	20**	.17*	14*	14*	16*	3**	.03	09	.04	1
9.	Willingness 2	.0	.17**	29**	44**	38**	53**	22**	46**	.3**	41**
0.	Willingness 3	01	.19**	32**	46**	39**	5**	21**	42**	.25**	45**

		1	2	3	4	5	6	7	8	9	0
.	Gender										
.	Age										
.	Frequency										
.	Units										
.	Past binging										
.	Audit										
.	PWM										
.	Attitude										
.	Subnorms										
0.	Slfeff icacy										
1.	PBC										
	Inten										

2.	tion	.04									
	Probl										
3.	em-focused	.1	.13*								
	Acco										
	mmodation										
4.	coping	.01	.08	37**							
	Avoi										
5.	dance coping	.13*	12	05	27**						
	Tensi										
6.	on reduction	03	08	36	21**	13*					
	Deva										
7.	luation coping	.15*	08	.03	28**	64**	11				
	Intrin										
8.	sic motivation	00	.35**	15*	1	.02	04	07			
	Ident										
9.	ified regulation	.02	.36**	15*	09	01	04	05	77**		
	Introj										
0.	ected regulation	.12	.36**	1	14*	02	.02	0	6**	65**	
	Exter										
1.	nal regulation	.24**	.18**	.09	02	1	.1	11	4**	38**	52**
	Amot										
2.	ivation	.38**	.01	.1	07	1	.04	11	16*	06	26**
	Expe										
3.	ctancy	09	.32**	.1	.02	.17**	.06	.07	23**	16*	19*
	Extra										
4.	version	03	19**	2**	08	.01	28**	0	07	02	.09
	Neur										
5.	oticism	.03	24**	01	02	08	21**	03	.03	.04	04
	Impu										
6.	lsivity	.07	22**	07	03	16*	27**	20**	.09	.13	.03
	Alc-										
7.	coping	.12	43**	.06	.0	2**	05	15*	.19**	.15*	.08
	GHQ										
8.		.02	17**	.17*	.07	.01	07	.02	.05	.07	0
	Willi										

9.	ngness 2	.05	55**	.07	03	21**	09	18**	.35**	.34**	.35**
	Willi										
0.	ngness 3	04	54**	.07	03	21**	12	21**	.33**	.33**	.39**

		1	2	3	4	5	6	7	8	9	0
	Gend										
.	er										
	Age										
.											
	Freq										
.	uency										
	Units										
.											
	Past										
.	binging										
	Audit										
.											
	PWM										
.											
	Attit										
.	ude										
	Subn										
.	orms										
	Slfeff										
0.	icacy										
	PBC										
1.											

2.	Intention								
3.	Problem-focused								
4.	Accommodation coping								
5.	Avoidance coping								
6.	Tension reduction								
7.	Devaluation coping								
8.	Intrinsic motivation								
9.	Identified regulation								
10.	Introjected regulation								
11.	External regulation								
12.	Amotivation	48**							
13.	Expectancy	05	.1						
14.	Extraversion	05	08	.06					
15.	Neuroticism	0	17**	.28**	.01				
16.	Impulsivity	.05	10	.14*	35**	27**			
17.	Alc-coping	03	21**	.56**	03	37**	34**		
18.	GHQ	.02	08	.27**	.12	48**	16*	38**	

9.	Willingness 2	.1	05	.37**	16*	23**	21**	43**	17**	
0.	Willingness 3	.15*	03	.31**	21**	20**	27**	43**	17**	92**

B.26 Correlations for study variables

PWM

PWM significantly positively correlated with units, AUDIT, self-efficacy, intention, amotivation, extraversion, drinking to cope and willingness. PWM significantly negatively correlated with attitudes, subjective norm, intrinsic motivation, introjected regulation, extraversion, drinking to cope and willingness.

Attitude

Attitude significantly positively correlated with frequency, units, past binging, AUDIT, self-efficacy, intention, extraversion, neurotisims, impulsivity, drinking to cope and willingness. Attitudes significantly negatively correlated with PWM, subjective norm, problem coping, intrinsic motivation, identified regulation, introjected regulation, external regulation, positive alcohol expectancies.

Subjective norm

Subjective norm significantly positively correlated with intrinsic motivation, identified regulation and introjected regulation and positive alcohol expectancies. Subjective norm significantly negatively correlated with frequency, units, past

behaviour, AUDIT, PWM, attitude, intrinsic motivation, identified regulation, introjected regulation and positive alcohol expectancies.

Self-efficacy

Self efficacy significantly positively correlated with frequency, units, past behaviour, AUDIT, PWM, attitude, PBC, intention, impulsivity, drinking to cope and willingness. Self efficacy significantly negatively correlated with subjective norm, accommodation coping, intrinsic motivation, identified regulation, introjected regulation, external regulation and positive alcohol expectancies.

Intention

Intention significantly positively correlated with frequency, units, past binging behaviour, AUDIT, PWM, attitude, self efficacy, extraversion, neuroticism impulsivity, drinking to cope, GHQ and willingness. Intention significantly negatively correlated with subjective norm, problem focused coping, intrinsic motivation, identified regulation, introjected regulation, external regulation, positive alcohol expectancies.

Problem focused coping

Problem focused coping significantly positively correlated with accommodation coping, intrinsic motivation, identified regulation, extraversion. Problem focused coping significantly negatively correlated with attitudes and GHQ.

Accommodation coping

Accommodation coping significantly positively correlated with problem focused coping, avoidance tension reduction devaluation and introjected regulation. Accommodation coping significantly negatively correlated with self efficacy.

Avoidance coping

Avoidance coping significantly positively correlated with units, past binging, accommodation coping, tension reduction, devaluation, introjected regulation.

Avoidance coping significantly negatively correlated with PBC, positive alcohol expectancies.

Tension reduction

Tension reduction significantly positively correlated with accommodation coping, avoidance coping, extraversion, neuroticism, impulsivity. Tension reduction did not significantly correlate with any of the variables except for age.

Devaluation coping

Devaluation coping significantly positively correlated with units, past binging AUDIT accommodation avoidance coping impulsivity drinking to cope and willingness. Devaluation coping significantly negatively correlated with PBC.

Intrinsic motivation

Intrinsic motivation significantly positively correlated with subjective norm, problem focused coping, identified regulation, introjected regulation, external regulation, amotivation, positive alcohol expectancies. Intrinsic motivation significantly negatively correlated with frequency, units, past behaviour AUDIT, pwm, attitude self efficacy, intention, drinking to cope and willingness.

Identified regulation

Identified regulation significantly positively correlated with subjective norm, problem focused coping, intrinsic motivation, introjected regulation, external regulation and positive alcohol expectancy. Identified regulation significantly negatively correlated with frequency, units, past binging and AUDIT.

Introjected regulation

Introjected regulation significantly positively correlated with subjective norm, accommodation coping, intrinsic motivation, identified regulation, external regulation, amotivation and positive alcohol expectancy. Introjected regulation significantly

negatively correlated with units, past binging, AUDIT, pwm, attitude, self-efficacy, PBC, intention and willingness.

External regulation

External regulation significantly positively correlated with intrinsic identified introjected. External regulation significantly negatively correlated with unit attitude, self efficacy PBC intention and willingness.

Amotivation

Amotivation significantly positively correlated with past binging, AUDIT, pwm, introjected regulation, external regulation, neuroticism and drinking to cope. Amotivation significantly negatively correlated with pbc.

Expectancy

Expectancy significantly positively correlated with subjective norm, intrinsic motivation, identified regulation, introjected regulation.

Expectancy significantly negatively correlated with frequency, pwm, attitude, self-efficacy, intention, avoidance coping, extraversion, neuroticism, impulsivity, drinking to cope, GHQ and willingness.

Extraversion

Extraversion significantly positively correlated with units, past binging, PWM, attitude, intention, problem coping, tension reduction, impulsivity and willingness. Extraversion significantly negatively correlated with none of the variables.

Neuroticism

Neuroticism significantly positively correlated with frequency, past binging, AUDIT, attitude, intention, tension reduction, amotivation, impulsivity, drinking to cope, GHQ and willingness. Neuroticism significantly negatively correlated with positive alcohol expectancy.

Impulsivity

Impulsivity significantly positively correlated with frequency, unit, past binging, AUDIT, attitude, self-efficacy, intention, avoidance coping, tension reduction, devaluation coping, extraversion, neuroticism, drinking to cope, GHQ and willingness. Impulsivity significantly negatively correlated with expectancy.

Drinking to cope

Drinking to cope significantly positively correlated with frequency, units, past binging, AUDIT, pwm, attitude, self efficacy, intention, avoidance coping, devaluation, amotivation, neuroticism, impulsivity, GHQ and willingness. Drinking to cope significantly negatively correlated with subjective norm, intrinsic motivation, identified regulation and positive alcohol expectancy.

GHQ

GHQ significantly positively correlated with frequency, units, past binging, AUDIT, intention, neuroticism, impulsivity, drinking to cope and willingness.

GHQ significantly negatively correlated with problem focused coping and positive alcohol expectancy,

Willingness

Wilingness significantly positively correlated with frequency, units, past binging, AUDIT, PWM, attitude, self-efficacy, intention, avoidance coping, devaluation coping, extraversion, neuroticism, impulsivity, drinking to cope and GHQ. Willingness significantly negatively correlated with subject norms, intrinsic motivation, identified regulation, introjected regulation, external regulation and expectancy.

Appendix C

C.1 Interview schedule

Predicting alcohol consumption among university students using the Theory of Planned Behaviour (TPB), the Prototype Willingness Model (PWM) and Self Determination Theory

INTERVIEW PROTOCOL

What is your mother's maiden name? _____

What is your city of birth? _____

Date_____

Interviewed by_____

Introduction

I am going to be interviewing you about your beliefs, attitudes, present and past habits, regards alcohol consumption. In addition, I will ask you some questions about your close friends and your parents' views about drinking and their habits, as people close to us have influence in our choices. The interview can take from 45 minutes to 1 hour.

- Before I start interview I would like to know if the religion or other personal beliefs prevent you from drinking alcohol.

The students who consume alcohol will be taking part in the interviews. This question is aimed to select the participants for it.

The students will be given an alcohol unit calculator to count the units of alcohol they usually consume.

Alcohol consumption
-How often do you drink?
-How many drinks do you usually have?
-How often do you have 6 or more drinks in one occasion?

Past behaviour
- How many times did you binge drink (drank more than 6/8 units) within the last 6 months?

Theory of Planned Behaviour

Attitudes

- *If you binge drink next week, how would you feel about that?*
Prompt: Will it be something pleasant to do, or you could describe it differently?

Subjective norm
- *What do you think the person close to you would think about you binge drinking next week if you did so?*
Prompt: Does the person approve/ disapprove? Why?

Self efficacy
- *What stops you from drinking over limits? What are those barriers?*
Prompt: Is it financial? Your responsibilities? Time?
- *Do you find it easy or difficult to binge drink?*

Perceived control
-*Is it you who decides you will drink over limits or not? Out of ten, ten being highest score, how much would you rate the control you have over your drinking.*
Behavioural intention
- *Do you plan/intend to drink to excess over next week? How likely?*

Prototype Willingness Model

Prototypes of a drinker
- *How would you describe a typical young adult who binge drinks?*
Prompt: What would be the definitions you would use to describe him/her?

Prototype similarity
- *How similar do you think to that young adult you have just described?*

Prototype of a non drinker
-*How would you describe a typical young adult who does not binge drink?*

Prototype similarity
- *How similar do you think are you to this person?*

Coping Styles
Have you ever drunk alcohol as way of coping?
Think of the most difficult situation you had recently and please tell me what coping strategy you used.
Prompt: What do you tend to tell yourself in a difficult situation?
(financial, study pressure, difficulties in performing some of your duties, problems at work, disagreements with friends, any health problems)

Motivation
Intrinsic motivation
- *What motives helps you drink less and stay healthy? Can you tell more reasons?*
-*Do you think staying safe is fun and something you get satisfaction from?*

Identified regulation

- Is it important to you to keep within limits?

- Do you value the benefits of not drinking?

Introjected regulation

- Do you feel ashamed and bad about yourself when you drink over limits?

- Do you feel proud not to be drinking over limits?

External regulation

- Do you feel obliged to listen and follow alcohol advice? (of close people or media)

Amotivation

- Do you ever think it is waste of time to concentrate on not drinking for health reasons?

Alcohol expectancies

- What effect do you expect alcohol to have?

Prompt: Does it help to express your feelings easily? Does help you sleep etc? What else does it help with or does not?

Positive alcohol expectancies

- Can you please tell me the reasons you drink alcohol? (as many as you can please)

Prompt: Do you do it to relax?

Alcohol consumption being a student

- Do you have any knowledge about alcohol related procedures at the university?

- Are you familiar with help available at the university?

- Did you receive any information about drinking?

- Imagine your friend had serious drinking problems and you were concerned about it. Who would you approach at the university, if you did so?

- What do you think about student bar?

- Do you live in a private accommodation or hall of residence?

- Is there any comment would you like to make about drinking culture where you live and how is it different to drinking in private accommodation/hall of residence?

- Is there anything you would like to add?

- Thank you for your participation

C.2: Consent form

Informed Consent Form

We would like you to participate in the internview, which will investigate different factors involved in students' alcohol consumption. In case you would like to take part in the interview it will take from 45 to 1 hour of your time. There will not be any risks involved in this study.

Sometimes participation in research can lead to distress. If any distress occurs please contact research supervisor andy.guppy@beds.ac.uk, Student Guidance & Support Services on sid@beds.ac.uk or telephone student support reception on 01582489622. If you have any concerns about your drinking, you can call National helpline services –Drinkline on 0800 917 8282.

The participation is voluntary. You can withdraw from the study at any time you wish and it will not affect your grades. You can also request for a withdrawal of your data after participation. All the information you provide us will be kept confidential.

If you have any questions, please contact us

Andy Guppy	Dilshoda Sharipova
andy.guppy@beds.ac.uk	dilshoda.sharipova@beds.ac.uk

Please read the following statements carefully and tick accordingly. □

I am aware this is a voluntary participation □

I understand that I have the right to withdraw from this study □

I have been informed about the purpose of this research project □

I understand and believe that my confidentiality will be maintained □

I give consent for the data I share on the questionnaire to be used for research reasons. □

I give consent for the interview to be recorded □

Please provide information below to assist us to match the data collected between now and 4-month time.

What is the name of the first school you attended? _____

What is your city of birth? _____

What month were you born? _____

What is your star sign? _____

C.3 Example for a matrix

Causal conditions	Subtheme	Subtheme	Subtheme
	Positive alcohol expectancies	Negative alcohol expectancies	Coping strategies
Participant 1	if I drink to the point where I become tipsy I become more flirtatious I become clumsier. Relax and I tend to speak my mind, I speak my mind anyway I speak my mind even more. I am generally to meet new people I become extra sociable so ...	I started to notice that I would kind of stomach aches after drinking and my skin starts to break out so for those reasons I would not do it too often but now and then	Ok I will speak to people about it an I should think about it think of different ways I kind of solve my problems trying to get peoples opinion that's I kind wanted to say and I try to be positive as well I keep positive mentality so that was going on thing go I would not say depressed sad yeh I try to look at the situation in logical way what's going on how else it can be solved sometime I am too angry see that or too upset to see that that's when I need someone else I that point I don't even need say anything I just need to get off my chest And after I ask myself the same questions again take on friend advice until I kind of see the way around it and if I do not see I kind of think ok what is the positive come from this everything I focus in my life there are more positive so I guess this would be my
Participant 2	When I drink whisky it somehow	I used to drink more. It was experimenting, I	I would say I don't think my coping methods are very well I am not saying

	enhances my creativity, somehow it helps me to express it better for example it happened to me I was drinking whisky and I was writing university work and I got A. Alcohol keeps me away from other people's judgments. What I know it does to me because I tried at the beginning and it worked puts me to sleep easier otherwise I am fidgeting and I don't want to go to sleep sadly even if I take medication it does not necessarily work for me they don't know why something with brain chemistry of mine. I don't have enough melatonin for me falling asleep is difficult.	did not enjoy, I was not happy and got agitated so I drink less.	effective but they are not very healthy I have that tendency to become workaholic at those times now at university apart of today I am coming I am coming at 8 am in the morning and going home at 4- 5 in the morning I don't go home not because I am tired because I am expected to go home, I stop eating I think eating and sleeping is inconvenience switching your brain eliminates everything it is not very good I get lot of work done though from that point of view it Is effective, health wise it is horrible. I usually say to myself I think it comes from my mum if I work hard enough I would solve everything hence I become workaholic.
Participant 3	I feel happy, confident, become friendly, caring, over think things, bubbly, lively, dancing, and singing. It gives confidence but it is temporary confidence	I do not like visiting a doctor, hospital, going for consultation for any reason. If you drink, you see yourself encountering accidental scenarios. You might be involved in accidents at home, outside	Friends I suppose, I talk to myself first before I talk to my friend that's I don't publish all my staff what s going I am quite reserved people I am close to I would console in, I talk to myself and my mum

		anywhere, that is the main reason I do not want to drink.	
Participant 4	Some people take for enjoyment, good for them. Makes you relax, gives peace, you forget about things for a while. Some people get inspiration, some people get wiser, talk more, and write more, they succeed whatever they are doing.		When I see myself in a difficult situation I need to challenge myself, I say to myself be a pro this is my campaign. When I have misunderstanding, it violates my conscious, I switch off it and I do not let anything to bother me. I cut it off. If I had misunderstanding with you I would stop think about you. Sometime will make a decision to call you. Thinking causes lots of damage. I do not value the problem, if it important I come back after a break. If it is assignment and it is becoming problem I close the book and go out have fun. One day I will sit down and everything will be coming. I recognise it, I think of the ways to eliminate it.
Participant 5	I will be expecting to live life and have fun, do not care what other people think about me. It gives me confidence. You feel like more yourself, you feel like you are in a different world no not really actually it is very different, for that moment it makes you happy, cheerful.	It is good for that moment not after. Alcohol something you can get addicted to if you drink beyond your control, I don't want this to happen.	I feel like I don't do anything If I drink I feel like that's like dangerous I talk to someone about it. Try to solve it. I will have to talk to someone about it. Or I pray over it that's it really. I think I get angry with myself. think about it, go for a walk to think, try to forget about it, if it is about exams i relax try to bring myself down and do the work,

C.4 Invitation letter

Dear _____ (Name of the participant) _____

We would like to invite you to the interview on alcohol consumption of university students. We will be exploring the factors which contribute to the behavior in university particular setting.

We are confident the outcome of the research will help to understand student's needs, thus assisting the professional to target particular areas while dealing with students, who are prone to drink alcohol. Students' perception, their attitudes and beliefs will be explored. In addition, motivating, personality factors and their coping styles will be entered into the equation as they showed to be significant contributors of the behaviour in previous research.

The interview will take from 45-60 minutes of your time.

Interviews will be held in the following

_____(Dates)

_____(time)

_____

_____ (Location)

Please contact the researcher on dilshoda.sharipova@beds.ac.uk within a week to R.S.V.P to this invitation. We are positive that your contribution will be valuable.

Yours sincerely,

Dilshoda Sharipova

C.5 Contextual and consequences emerged during interviews

8.4.3 Intervening conditions. Contextual conditions are the specific set of conditions (pattern of conditions) that intersect dimensionally at this time and place to create a set of circumstances or problems to which person responds through action/ interaction (Strauss & Corbin, 1998, p.131-132).

8.4.3.1 Age. Eighteen is a legal age to be drinking alcohol. Most of the participants put emphasis on it (P-1, P-2, P-3, P-10). P-2 talked about her becoming 18-year-old and joining the university:

"I got to the age of 18 it was like yeah cause I am out, my friends drinking games I drank because that's how you had fun and drink, first year because it was heavily more or so as well one, cause I was a part of the society and I was in halls, like if I didn't live in halls, it would be a rare thing cause I would not really meet that much people to be invited to other parties and flat parties and all that stuff" (P-2)

This was the age "when you first go clubbing" (P-2) and "go to the house parties" (P-2). The youth is looking forward to becoming 18 "18 is a quiet a landmark of adulthood of being grown" (P-2). As person grows older habit change depending "because you know about it good sides and bad sides" as well as "the friends you keep" defines your habits either person carries on drinking (P-2). The events organised at university is about 18 old year ones needs:

"I think cause it is about alcohol consumption, and like I guess the role it plays in uni life, I think it is more or less an age mentality (laughs) cause the age you get here, but then I don't think the university hopes itself, in term that anyway, because like I said even fresher's fare event, it is around alcohol" (P-2).

The participants talked about the age they start drinking and how things developed from that point. P-5 said "when did I start? I was like 15", but for most of the participants it was 18 (P-2, P-3) or 20 (P-1). There are certain expectations, for example 16-year-old drinking viewed to be ending with violence P-7 "there was a lot of violence and fighting". At 16 in college P-7 said "there is guys want to show off, I think at uni there is less pressure to be popular". Mature students seem to go to wine bars than nightclubs.

The participants mentioned about age to be an indicator to be more responsible. At the same time students who were 1st year students reported more alcohol use than student who were 3rd year students.

"Person needs to have age appropriate control" (P-19)

8.4.3.2 Lifestyle changes. It seems the changes in lifestyle are one of the main intervening conditions as the first years are more likely to be drinking more: "I go out with my friends more, it is not the influence of my friends but more opportunities to drink" (P-22). By the time students reach the third year they tend to be concentrating on their studies (P-19, P-20, and P-21) and apply for jobs. P-20 said "Spend time studying; applying for a job, final year student, I drink less as my lifestyle changed".

"never done, gone out clubbing and loved it, but definitely now I think it has changed, I mean I had a job last year, but I have got 2 jobs now, got more uni work now, everything is getting more serious and I'd, I am in a mind frame where I earn not spend the money when I have other things I need to pay for, and I could be earning it" (P-14).

"One thing I have noticed is a few of the rugby guys, they were single last year and now they are in relationships, with girls and you don't see them out very often anymore" (P-14).

8.4.3.3 Responsibilities. Responsibly was mentioned in all different forms. Having responsibilities like work and university work and exams seem to intervene with students' alcohol decisions (P-1, P-3, P-5, P-7, P-10, P-13, P-14, P-15, P-16, P-18, P-19, P-20, P-21). A participant reported "quiet busy with 2 jobs and obviously uni this year" (P-14), another mentioned about her being final year student "assuming most people have a lot of things to do like school work-dissertation" (P-5). Being a driver for friends seems to put a lot of responsibility "I might sleep and I might leave others in danger" (P-11), or "if you drink one night you can't drive the next day, I am sensible with it" (P-3). Avoiding hangover seem to be another reason to be a responsible drinker "you drink less cause you don't wona feel hangover in the morning, may be you have to get to work in the morning". Trying to avoid embarrassment "I would not wanna get too drunk to embarrass myself" seems to effect and call for sensible drinking. "You don't wanna be a burden to others" (P-14) these lines shows person's taking responsibility over his drinking. In addition, students mentioned about restricting themselves in drinking because they care about their health and take responsibility over it (P-16). One student reported as a consequence of her experiencing irresponsible drinking of a friend she has, developed following attitude towards irresponsible alcohol as:

"and I hated, like my friend she loves alcohol and she drinks all the time, and I hate that she does that cause I don't like it, and now obviously what it does I don't like it, erm so yeah I changed my mind" (P-3).

She continued:

"I would not say, I find it quiet cool, but I felt like erm cause my friend she was quiet she was poorly and she used to drink as a coping mechanism, and I felt like if I was not on the same level as her then we would not, she would not feel comfortable so I

was sort of did it to help her, but then I realised that I did not need to do that, so it changed, yeah" (P-3)

8.4.3.4. Information/ knowledge. The theme information and knowledge emerged from the data. The participants showed interest in finding out the units as all of them were not aware of recommended amount or alcohol unit information "I don't know much about units", (P-20). Student mentioned posters being not informative enough for them to take on the information presented "I don't find any new information in posters", (P-19). In relation where students receive information from was social media "I think being like a 90s baby not having like all the media as well, but having like videos stuff like that glamorise it, it is something to look forward to, not so much now but" (P-2) which might influence their choices. The posters is another source, the information presented in relation to sensible drinking seems does not attract much attention of the students as most of them mentioned that they do not drink much (P-1, P-8, P-10, P-12), whatever their consumption level was, therefore they do not take in the information. Almost all students seem to think the message is not for them, as they consider themselves as sensible drinkers.

Messages are ignored as they are not relevant and students can not relate to them: "you don't drink some alcohol and you can wake up with liver damage …it does not kill them straight away and they just gona keep doing it. "I guess all is in the moment and you know you like it too much to give it up" (P-1). In addition, one participant reported her readiness to take on the message if it was presented in a visual way "I am more of the visual person, so like you know that all those smoking adverts

and stuff like that really get to me, so if they did like a alcohol advert or something I would be likely to listen" (P-5).

What messages are sent around the university students reported seeing promotion messages around the university or halls (P-2, P-22) “once I had in halls a door message with jagermeister on it”. Fresher’s events seem to be around alcohol “everyone in there was pissed” (P-2). The student was telling about the need to be able to enjoy the party except drinking “go to another party where the alcohol they will be drinking but they will be listening to good music, they will be dancing, they will be socialising, whereas most of the university events pissed, that’s it, solely it” (P-2)

8.4.3.5 Future self/role model for children. It is noteworthy that students who thought of future self and being role model for their children or thought of being successful in the future theses thought effect their drinking pattern. They are more likely to control how much they drink and question if they should be carrying on drinking as they grow. The main reasons not the be involving and working towards that positive image was taking care of health and be a good role model for children “I do not want to have diabetes, after several years I have children and you cannot demand from children the behaviour you do not possess” (P-19), “my son, I would not like to disappoint him in life … I want to live as an example” (P-21). Last was about having a successful career (P-18, P-19):

“I think the areas that are stopping me is because I finally I got my degree. I am about to move. I have a girlfriend now and also I want to learn more. My addiction is somewhere else. It is not on drugs I am addicted to studying more than anything so, as I say it is a different channel turned into rather than something negative” (P-18).

8.4.3.6 Self/self-image. Out of 5 participants only one participant was stressing about drinking being not attractive. Picturing herself looking unattractive stops her from drinking more.

"It does not look attractive. It is embarrassing…it doesn't feel the best some people puke throughout the night…. Feeling sick stops me, people being embarrassing around me, slobbish, does not look attractive, how I feel about myself it depends whether I drink or not", (P-22)

Self-image came across in the context of having an addiction and being addicted to alcohol. One participant mentioned himself being an addictive personality and he was clear about the self-image he had for himself and accepting the image helped him to move on and use his gift for greater purpose (P 18).

"was more than average student and that was above average you know. Obviously the top. And the drive that I had was not a normal drive because it was an addiction behind it. And ... I questioned myself I suppose; I am starting to understand addiction now. You know because if I channel it in a positive" (P 18).

8.4.3.7 Perception of prototype of a drinker and non-drinker. In relation to the perception of a prototype of a drinker 11 (P-1, P-2, P-3, P-4, P-5, P-6, P-9, P-11, P-13, P-17) out of 5 participants had the image of drinker, whereas 4(P-3, P-4, P-8, P-12, P-18) of them did not see any difference between them and their friends.

"… yeah they are exactly the same. I would say we are pretty similar if they are a friend we are similar" (P-22)

On contrary some of the students did compare themselves to a drinker and non-drinker.

"How similar? We are all, when you asked me if I take alcohol I did not say no, because I don't take to be drunk, I did not say no, I said yes because, definitely I take alcohol but not really often, so I am similar to that person because I still take alcohol, well that person takes more" (P-12)

Students seems to mention that they are not similar to a binge drinker although some of them drank excessively.

Binge drinkers were discussed to be people to have positive characteristics fun character, sociable, enjoys getting drunk, friendly, boisterous, popular. Negative characteristics mentioned were: low self-esteem, need alcohol to loosen up loud, shout a lot, cannot behave and they cannot control themselves.

"…. who really likes to have fun and she is kind of person when she goes out she would like to go all out (laughs) she is very fun character sociable she likes meeting new people and going out she likes clubbing and she enjoys getting drunk", (P-20)

"It depends on effect as well because some people behave quite normal but some people all over the place shouting loud you know like just like some people can't really behave this sort of people", (P-19)

When the participant to what extend they are similar or different to the binge drinker they mentioned to be more responsible, do not get into fights, has more self-esteem.

"May be she has low self-esteem, maybe she thinks it is thing for her to have fun or loosen up", (P-22)

In relation to non-drinkers participants gave the following characteristics: religious, likes to have control, sophisticated, reserved, boring, ruin the parties, someone who had a bad experience in relation to alcohol. The views were different both positive

"he is friendly, it so lovely" (P-13), "can be a little isolated" if there in more social setting

(P-10), "less sociable but more sensible in a way, erm but again it will be less fun" (P-7),

“they are fairly happy” (P-6), “Mature and strong willed” (P-5), “strong willed than I am”(P-5),“Sensible, erm organised, they know what to do with their..., they are clever enough to realise what alcohol does to them. They concentrate more on their life rather than in the moment, I think” (P-1), “work motivated, sensible, easy going may, they just they don't conform to everybody around them basically” (P-3), and negative “Quiet, introvert” (P-15), “a cut off from rest of us” (P-11).

“very sensible, they are aware of what is happening and they don't fall under peer pressure to drink as much alcohol if they don't feel up to doing it. And also they just like to be sociable but they don't feel they need to drink not to do that. That’s what I would say” (P-17).

“Non-drinkers some of them can be very boring and ruin the party because sometimes when you are with friends one person does not drink I don’t have problem with it yeah of course there are times I don’t drink it just that some people at those time behave critically worry too much or you can just see that they sort of looking towards the door why are you here than? There are people they cannot enjoy, when I don’t drink I can still enjoy myself the same way”, (P-19)

When participants were asked if they are similar or different to non-drinkers they mentioned to be less reserved, more easy going, more sociable, normal, more confident.

“I will say they wanna be in a good place may be they experienced something in their life and may be a friend died from it may be abused them may be in environment doing drugs and putting dung in their drink may be it can be in their religious. May be personality don’t like drinking they don’t need to drink. They are strict with their faith. They want to have peaceful life. I feel like they are not confident enough”, (P-23)

Here are the characteristics students would give to a binge drinker

"more sociable, he is having a good time, making more friends" (P-10), "less healthy, less adjusted" (P-10), "Alcoholic" (P-9), "It is quite normal, a social person probably", (P-7), "I would say fun" (P-7), "reckless, stupid" (P-1) "but if you are going through your life doing that, then there must be something wrong" (P-2), "they don't know how they are behaving" (P-17), "I think young person" (P-16), "Merry, aggressive, happy, sad, cheeky, more confident" (P-15).

"that's how people stereotype alcoholism, a drinker. That's completely wrong as well than you look at the other side of spectrum where you got the highest of the high, a prime minister or a doctor or do you know what I mean. someone in a high class job and they are alcoholics" (P 18)

As far as person can control themselves it is ok

"erm, the similar with that person, is the limit I can control it, I respect any person if they control it. If they want to drink ok 10 or more than 10 they can feel ok they can control their body or the language, that's fine" (P-13)

A student who drinks a lot being on his last year is not the best thing to do.

"An Idiot, a dick erm cause if he is around my age first of all I am 20 years old, most of the first years at uni are 18 years old, if he is 20 he is 3rd year, if he gets drunk every couple of days, first of all, he spends a lot of money, that his parents give him to make through the month or something, so he spends a lot of money, he does not care, he does not give as much tension as he needs to give to your studies, erm sets a bad example, erm just about it" (P-11)

Students talked about drinkers and the addict have been seen to be the people who would not care much about people around as they are selfish.

"I think about myself and I don't care about anyone else's here but in that respect you know what I mean. That's what an addict is so... they are selfish self-*centered and*

that's all they care about. So that would be me, but I think you have hit the nail on the head that", (P-18)

He talked based on his own experience in life.

"No. as long as had my drink I did not care. I did not care what anyone's opinion". (P 18)

Students who did not compare themselves to drinker and non-drinker did not give any definitions to them too as they found question awkward (P-1, P-3, P- 5, P-6, P-8, P-12, P-13, P-18)

"Someone who drinks a lot, my characteristics my thought on them I would not see them as any different than me" P-18

P-3 reported his observations of the students who drink a lot while at university, they are not the ones who are into studying as much and do not put too much effort to university work.

"A lot of the people I am around with, they drink a lot, they are always like talking about the next time they gona drink, erm or the next party they gona go to, like I very rarely listen or hear them talking about university work, it is more like oh we are going out on Friday night, and I would be like ok, that's nice I am doing an essay. erm yeah that's sort of always, and they talk about previous times they have been drunk and they sort of see as a cool thing whereas I am just like, that's nice I don't really don't see is as cool, yeah I don't really" (P-3).

8.4.3.8 Motivation to stay within safe limits. From the participants interviews it is very obvious that most of the participants do not want to be drinking excessively to avoid embarrassment (P-9, P-10, P-15, P-17, P-20) "if I get completely drunk I would fool myself" (P-17), shamed (P-9, P-15) "from what people told me afterwards just do something stupid, like rolling on the floor" (P-9). Accidents from happening "If I was

driving and I was not paying attention to roads properly and all of a sudden I hit the pedestrian or I hit a car and crush a car" (P-17). Also if they have a job to go to and if they would like to look after themselves they would be drinking less (P-16). Them being religious will stop drinking alcohol "my religion" (P-5). Also "keep up appearance for the girls" seems to be motivating to drink less. Several participants (P-3, P-16, P-20) talked about health to be a motivating factor "reason is my health" (P-16). "I feel like I can't really trust anyone enough to anyone look after me" (P-23).

8.4.3.9 Negative life events. Experiencing alcohol related negative event seems to effect peoples' decisions (P-11, P-19, P-18). For example, P-19 says: "When I drank the very first time when I was in high school I had to go to hospital when they wash your stomach because I got alcohol poisoning that's not something what you forget, I think in a way I measure myself against that feeling and if I don't want to experience that anymore that's when I stop" (P-19). Whether it is personal experience or it happened with the member of the family It has very similar effect on people. "my mum is actually unbelievable alcoholic … she used to be really addicted to the stuff and so I kind of look at her …. you know I don't want to follow on her footsteps … (P-1). Negative events seem create negative memories people cannot get over and it works as a mechanism to prevent them from drinking much. but knowing that, from the experience "because you remember it is a devil drink" (P-2). The memory of what student have done at drunk state "I am sick instantly" (P-3), "Awful (smiles). I could not sleep … walk straight, I mumbled, erm, I slept on the floor, I puked, it was awful" (P-11). One of the students reported about her experience seeing rugby team and them drinking "being a first year seeing that, that was shocking, I was like … that's what you guys do every Wednesday?" (P-2).

The student who was previously addicted to alcohol and drugs came up with some examples of denial being a period in his life he had to go through until he found the way to understand his addictive personality. Denial was only mentioned by the participant who was abusing the drink. The interviews showed that most people the ones even drink excessively seem to think they do not drink as much as others or they are not like some people who drink a lot, which is a form of denial.

"I would say they are in denial basically, yeah in some respects it is until they have hit a rock bottom and they have got nothing in their life and they have that epiphany because it would happen if they have nothing then they would start to understand themselves a bit now. but they have got to go through it first so… "(P 18)

"There also the fact is not in denial of thing I can identify things a lot easier than people, but who are drinkers who think who have not got a problem" (P-18)

"what people have the misconception with is that they think an alcoholic the one who is chronic alcoholic who shakes wakes up they need a drink, no that's really" (P-18)

The same student talked about the abuse in his childhood which led him to look for the ways to distance himself by turning to alcohol and drugs. It was his way of coping in the difficult situations he faced as a child. It can be concluded that negative events in life can affect the person in a way to form their coping and dealing with difficulties in life either it is negative or positive.

"Erm. How can I put it? I have had years of abuse as a child, you know. My coping mechanism was actually to switch off. and I did that with drugs and I did that with alcohol, but then, one probably transferred to another because" (P-18)

8.4.3.10 Attitudes and beliefs. There is definitely difference in people's attitude. The student who used drink excessively and was addicted to alcohol drugs mentioned

his attitude change since he got into university "Everything is expanding, it going up not down. and in order for that to keep going up I know that alcohol can't play much part of my life" (P-18). He carried on saying "You know. Whereas before I never used to care I just got smashed whether it is drugs or alcohol, so... (P-18). An event which happened in his life boosted his self-belief and helped him to look at things in a different way. "I liked being inquisitive, I went to college then to university".

Some participants reported alcohol to be helping to manage boredom and have fun, it gives confidence to talk to and makes it easier to dance (P-2, P-7, P-10, P-21, P-23). Drinking is relaxing and it is accepted in this society for the students to be drinking. Whereas some students reported their beliefs that it can lead to accidents and getting rid of it would be possible to "save lives" (P-2, P-17). In relation to drinking at university they reported that drinking makes them "less effective" (P-15), it is not best when person becomes "burden" (P-14) after a night out which ruins the evening of a friend who is looking after him. Some reported having control is important (P-8, P-23). One of students talked about his belief to cause damage to his brain (P-12), opposite was reported by another student who was fine with drinking as there will not be a straight reaction to his health (P-1). Some students said there were more important things to do like "video games", "talking to a friend", "work" (P-6, P-3). Some reported there are more important things to do as they do not see any benefit of it (P-3, P-8, P-14). People who believe as they are religious and older seem to drink less (P-6). Also there is belief that people have alcohol for different reasons (P-6).

"I worked for a whole year, before I came here because I did not want to come straight away I did not feel like I was ready, not ready but my brain was not, back into educational standards yeah, so took a year out and that year I barely drank, I very very

rarely drank because I was working, so much and I found that I don't need it so, yeah it was a bit of an eye opener" (P-3)

From the conversation with P-19 it could be said she believed that drinking with a meal does not have the same effect "I do with food it does not really have the same effect". P-22 reduced her drinking as she is a final year student but mentioned it was not to do with attitude she had towards drinking. She still enjoys it and believes when she drinks she usually does with people close to her and feels happy "If I drink next week I will be happy, I will be around people i like, positive vibes, do not feel anything negative. You should do if pleasant", (P-22)

(P-23) had a negative belief about alcohol and seem to have more control over her drinking behaviour "it feels strange, drink controls you, it's unpredictable, cannot find word for it … I do not want to go out of control, because I know I am by myself, I am not with my parents, in case anything happens", (P-23)

8.4.3.11 Expectations (person's). Students mentioned about their expectations of alcohol to be a part of any social gathering. They do not intend to drink, but the fact that alcohol will be there predicts them drinking (P-19, P-20, P-21, P-22, P-23).

"I am going to the cinema meeting people I expect there is always alcohol. It is just expected of the situation", (P-23)

8.4.3.12 Intentions. In relation to intention students mentioned they have intention, some of them have intentions (P-1, P-4, P-10, P-11, P-12, P-14, P-16) and sometimes it happens spontaneously (P-20). Most of the occasions when they have party or birthday or any other event they know they will be drinking. University have student nights on Wednesdays so it is the day to drink (P-4). Students reported that if there is a party it is expected that alcohol will be there (P-23).

"I don't have an urge to drink and I don't be like I need a beer right now, it is always a planned event like let's say it could be my mate's birthday, it could be just social gathering, we are going out, erm go to the club or the pub something like that, it is always planned" (P-1)

8.4.3.13 Knowing one's limits. Knowing one's limit did not necessarily mean sensible drinking (P19, P-22).

"I know my limits, if I start feeling clumsy than I stop drinking"

P-9, P-11. P-12, P-14, P-20 talked about knowing their limits and they stop drinking when they got to the certain point they set up for themselves, either it is "getting clumsy" (P-20) or do not drink to the point when they "start misbehaving" (P-12). Only one participant said he does not set a limit (P-10):

"I don't really set a limit, I just drink till I don't feel like drinking anymore or the club is closing or we are going home anyway so, like if I feel like getting more drunk then I am then I will buy more drinks but erm, don't really set a limit, I don't really, cause if I am drinking I drink to get drunk. I don't drink to; I do drink socially but mostly I drink to get drunk." (P-10)

The alcohol to be consumed seems to be defined not by units but the tolerance students have or until they achieve the certain degree of drunkenness.

Yeah, I think a lot of people my age finds it irrelevant units I don't think they measure alcohol by units when they are my age, you more think of, you just know your personal limit, that's all it is, you don't really think oh I have had 2.5 units you just think "oh I have had enough to make me happily tipsy" erm and I don't think we worry too much (P-14)

8.4.3.14 Finances. When students talked about finances in relation to their alcohol use they mentioned alcohol being a cheap enjoyment and anything else costs too

much (P-2, P-14). This suggests that students would be engaging in drinking as they reported there are not many places to go in Luton. It is relatively cheap to get drunk (P-14). Although some students reported having less drinks because they could not afford it (P-4, P-7, P-12), contradicting argument was that for some of them financial problems meant more use of alcohol. In this particular case lack of finances was a way to turn to alcohol to escape from the situation (P-15). Students reported having money meant more parties thus drinking (P8). Two students mentioned about students' poor financial decision get them into financial trouble (P-2, P-18). SU bar was mentioned to be a good place for students to spend time as the drinks are affordable (P-1, P14).

"Erm, I find it quite difficult, financially first of all, financially it will be a bit difficult since we are students and I don't know I am just not drawn to the idea of going out and drinking all the time, I don't mind like, if I could I would drink couple of drinks with my mates, but more than that that would be like too much, no" (P-11)

8.4.3.15 Willingness and strong will power. Willingness to accept offered drink when the person already had enough to drink majority of the participants said they would accept the drink (P-1, P-5, P-6, P-7, P-14) and some would not (P-5, P-15) "I would not accept if I had enough". Also people mostly seem to agree to accept the drink if there is someone they trust is offering it. Most of the participants talked about their concern about drinks to be spiked. The fact that the drinks can be spiked would influence their decision or willingness to drink "who looks a bit shady you don't really want to be dealing with that" (P-1) Also participants mentioned if the effort was made to make a drink they would likely except it or if it has been paid for already (P-7, P14)because if they have gone … to trouble making it and then giving it to me (P-14).Being stubborn and having a strong will seems to make it easier to say no "if you push high and convince me I am like no, I am really, quiet strict on that, but all stubborn

which , if I don't wona do something then I won't do it, but for me is like, a lot of I don't wona be, it is not even unhealthy cause that's whatever, cause you can do what that, if for work especially"(P-3)

8.4.3.16 Economy. Current economy was mentioned to be effecting the prices of alcohol "like most things have gone up, so it is just on the way of the most things in the economy, but the alcohol, like obviously the university self does not promote it, but having the SU part of the lounge and part" (P-2)

8.4.3.17 Boredom. Student reported being bored for being a reason to consume more alcohol (P2, P-5, P-10, P-11, P-14, P-17), if they did not enjoy the party they are more likely to drink more. There was one contradicting interview in which student did the opposite "When I am bored I drink less, and excitement drink more" **(P-13)**

Also, being bored at home students found easy to drink to relieve boredom or get together with friends and drink when there is nothing for them to do (P-5, P-10)" if I am like depressed or the company is not good and I am bored, I might get drunk so it depends on a lot of factors" (P-11). In addition, they reported that SUB 2 is boring so they drink more during student night (P-2, P-14). So alcohol plays as a coping with boredom.

8.4.3.18 Perceived difficulty and ease to drink. Perceived difficulty or ease of taking a drink was reported to be connected to the preference of alcohol "I don't find it easy when taking the sweet ones" (P-12) and the more student drank the easier it got to enjoy the taste of it, may be the tolerance was built (P-10): I don't like beer that much but I would drink it and once you had 2, get used to the taste and you like you just drink it, yeah (P-10)

8.4.3.19 Coping strategies. In relation to coping strategies students used it was obvious most of them used social support seeking when they talked with their parents

and friends (P 2, 17, 14,10, 9, 7, 1), “I talk to my friends about it” (P-10). Several of them mentioned about praying when things went out of control (P-5, P-9, P-12, P-17,) “to cope I pray” (P-17). Some tended to distance themselves from the situation to come back to it later with a clear head (P-3, P-4, P-7, P-8, P-11, P-13, P-14, P-17). 2 students reported not to be doing anything and wait until things sort out itself(P-9). One of them said she always gets very anxious and have panic attacks, and tries to sleep it over. Some reported revaluating the situation (P-4). Some turned to “junk” food for a comfort ()8, p14). Some students reported concentrating solving the problem (P-3). Some of them mentioned about them doing sports (P-3) and some physical activities like gardening (P-17). Student seem to deal study pressures ad relationship problems sometimes it can be financial problems. A student who drank accessibly previously mentioned he used alcohol to cope both with positive and negative emotions he had. Now since he does not drink he turns his attention to something interesting like work and that’s how he copes snow (P-18).

8.4.3.20 Personal decision. Student talked about drinking to be personal decision (P-21, P-22, P-23).

“I think it is my personal decision to stop drinking that much but, if someone asked you did drink that much I would not think any less of them, I just think they are normal” (P-23)

Also when discussing about choices people have in relation to alcohol was reported to be personal too as whatever it is it is personal decision too. And in case person is addicted it is only he can help himself.

“I am gona say I am horrible friend here I have been trough and done it myself and the only person that can help them is themselves, so I would not go out my way and

say look you really need to come here and you need to know does not work like that. When you are n addict you are an addict. You are not gona listen to me" (P-18)

8.4.3.21 Person's state. P-7, P-11, P-14 stated about states of the person in a drinking session would define the behaviour. "Sometimes you have a bad day, and you feel like drinking more but sometimes you have a bad day and you just don't want to go out at all. But erm, uni work especially if I have got a lot of work on I won't drink, so that effects it "(P-14).

"I got my girlfriend drunk was the first time that she ever got drunk, and that's because erm, the days we were out it was her brothers birthday, the brother she actually lost so psychology was really low, she was at the edge of depression, so a few drinks make her super drunk, she normally drinks more than me and she is ok, she is not, she never got drunk, erm but if at the psychology level you are fine and you are happy, not having problems, I think that gives you like an immunity a certain degree of immunity, if you are depressed or sad or you are coping with a lot of problems, drinking erm, will get you, I don't know, getting drunk will be more easy for you, that's what I think, you should add erm, the way you feel the psychology" (P-11). Fear of parents finding out about drinking or smoking "Disappointment, fear of violence, or fear of not speaking with them (parents) again, or telling the parents or something, fear of parents, I don't know, that will be the only thing I can think of" (P-11). Being tired "I can't control it and when I am tired, I can stop it, like, when I go to the party I drink 2 units (P-13). (see also mood boredom)

8.4.3.22 Enjoyment of the effect. From one person to another effect alcohol has seems to be different and people drink it because of the effect of it. "They like the effects of what it has on them it takes you to a place where you don't have to think or feel bad cause it affects you in a such a weird way erm but yeah I guess some people

generally just like the taste of alcohol but some people drink alcohol because the effect it has on them". (P-1)

8.4.3.23 Lack of time. P-14 and P-16 talked about having no time for alcohol. It is because of the responsibilities on them "I don't have special ideas; I think it is a long time I don't have time" (P-16).

Like I said I got 2 jobs and uni … I seem to be quiet busy all the time. Erm, but any spare time I do have I just, I don't know, I always try to busy myself doing something cause I don't like having to much spare time so... (P-14)

8.4.3.24 Understanding one's personality and body. Personality factor has emerged as P-2 mentioned depending of the person they would response to the environmental cues "you behave differently and learn things before you go through them, but it works both ways, cause that person could live in halls and be normal and not live in halls and throw outrageous parties, I don't think it is really", (P-2). P-18 cited about his addictive personality **"**how can I put it, alcoholic is one word but it is a bit too strong because being an addict can define you in many things A drug addict or alcoholic as an addictive personality. I think about myself and I don't care about anyone else's here but in that respect you know what I mean. That's what an addict is so... they are selfish self-centred and that's all they care about. So that would be me, but I think you have hit the nail on the head that" (P 18). Understanding oneself and accepting who you are makes it easier to face the addiction or even personal excessive alcohol use. "I'd say they are in denial basically, yeah in some respects it is until they have hit a rock bottom and they have got nothing in their life and they have that epiphany because it would happen if they have nothing then they'd start to understand themselves a bit now. but they have got to go through it first so... (P 18). P-18 life was changed when he accepted and found himself "have not gone to uni and I actually find myself and actually start to

understand my own feelings I'd still be in the same situation or worse. So yeah the university changed my life because it made me look at things in a different way… I understand addiction now. You know because if I channel it in a positive way I get good results. But if I channel it in the wrong way by drink or drugs than obviously the outcome is negative. Erm yeah the epiphany was actually understanding the addiction which I never had them before" P-18. Having a personality to speak up and stand up for yourself "May be, friends the factors, you go to the party with your friends and your friends want to drink more and you want to drink more with them, but you can't control it, like I said my limit is 5 units and when they want to drink more than 5 I ask them ok, that's enough I can't drink anymore, yeah and stop her" (P-13)

In addition to understanding personality knowing one's body would be an advantage as people are different and the effect alcohol has on them too "alcohol can effect different people differently, I am quite a light weight, a little bit alcohol in me and I will be gone, but someone else it might not affect them so you can't really put a limit on that, when there is so many differences between people, so it is just safer just not to drink any at all**"** (P-14). "Its pleasant in one respect yeah because I know that I can it is on off switch with me, but in some respects I know that my tolerance is very low now, so me having 2 pints last week after I was finishing our exams, I felt very ill, when" (P-18).

8.4.3.25 Policy. In regards to the policies around alcohol, official drinking age 18 was stated by several participants (P-1, P-2, P-3, P-10). It seems reaching 18 is time for the youth to start drinking and experimenting and checking the boundaries in relation to alcohol "I felt like that, that's what you do when you are 18, you sort of try this and then but I soon got over it (giggles)"

(P-3). “The first heavily experience you have of alcohol is a binge and it is because all your life from that point you have been waiting to drink” (P-2). Associations of being 18 were not made about only starting drinking but binging too. On the contrary, (P-1) claimed although the drinking age is 18 he started drinking at the age of 20. (P-10) stated that when the person reaches that age it makes alcohol more accessible for them as they are allowed to go to bars and night clubs “more places open to us”. The certain restrictions were made in relation to serving drinks (P-14) “can’t give you a triple” in student bar and night club, and the who is allowed to those places as mostly students are allowed to the university nightclub “they ask for student card” (P-2).

P-2 and P-11 were from Afro Caribbean and Greek culture, as they talked about culture they mentioned them drinking alcohol at young age, “in our culture we have Guinness punch” which is a drink Guinness mixed with condensed milk. P-11 mentioned being offered a drink by a family friend not reaching the appropriate age. In addition P-11 talked about the experience he had in the Army “I could not drink more than 2 times a week” whereas in the university “I have all the time for myself”.

In the university student accommodation, students reported to have “it is not allowed to have more than 10 people in a flat” (P-4), “it is not permitted to have the whole floor coming to the party” (P-11). According to the severity of incidents ambulance or police get involved in (P-2). Although there are regulations set P-2 mentioned it might be “parents feel safe knowing he security on site 24/7, but do not know some people may be some people better not living in halls for 1st year”. Private student accommodations “people who live in student accommodation they will have restriction of having much drink. And they control themselves, but the people who live in a private accommodation definitely if you are addicted to drink you are drinking all the time” (P-12). Contradicting was “it is literally a house full of students, on a whole

street, full of houses full of families, so when you see people coming and going and there are parties going, there is more police that would be called and the landlord comes then stuff like that, but in halls obviously we have security for a reason cause like I said people" (P-2)

In regards to drinking and driving P-3, P-11, P-13, P-14, P-15, P-16 agreed that it is better to be safe and not drink and drive.

I mean unless you are driving but I have always gone by the thing of if I have had anything to drink you don't drive, if you are driving just don't drink anything, just to be safe, but that's the only time I think that people my age would pay attention to units as if they are driving, but other than that I don't think people really care or even some people don't even know what are unit, (P-14)

8.4.3.26 Accessibility. Students reported several accessibility factors e.g living in halls of residence "You do think that like in halls of residence there is more drinking involved (P-2, P-10, P-14) Cause they a literally doors away from each other, like your flat" (P-2). Another factor is having enough finances (P-2, P-14) "I don't know where they are getting the money from, they every Wednesday be drinking … still can get something for a fiver (P-2). Having affordable clubs would encourage students to go out "I think they should definitely specially in Luton increase the amount of places that students can go and get a good price because liquid is closed now so we can't go there … SUB 2 gets a bit boring understandably for some people … they need to do something else other than SUB 2 (P-14) and Luton currently is not seen as a good place for clubbing. Accessibility was also defined being 18-year-old "We are legally allowed to drink and more places are open to us like being 18, rather than college 16 -18" (P-10). Whereas living in a remote area, being 16-year-old and living in a private accommodation makes it more difficult to get together with friends for a drink (P-, P-7,

P-10). Being invited to the parties is another accessibility factor “Well I went to more parties so I drank more like on a almost daily bases, but that is changed so… (P-8). Having cheap drinks “Yeah, pretty much, Tesco has a deal 3 for 5 pound I usually go for that, when I do want to drink”, (P-6). Being treated or having free drinks ‘If I knew the person and they have paid for it, I would probably accept it, if I did not know them, and they paid for it, I would not accept it, f i had to pay for it I would probably not accept it, if I did not want it” (P-6)

The theme of accessibility has emerged from the students’ interviews. Several participants mentioned about student halls to be a place to drink (P-2, P-10, P-14), as they have their friends or university mates next door which creates very good opportunity for organizing parties as they do not have to invite friends over and It takes less effort for them to have a drinking session with friends. On the contrary, some students mentioned about restrictions in student halls and having one’s own flat or house makes it more accessible for them to have parties. Several of them reported no difference in student drinking behaviours, whether they are in halls or private accommodation. Although finances were mentioned under intervening conditions it seems it is interlinked with accessibility in this particular situation of students who live in student halls and the availability of finances makes it easy for them to involve in the activity (P-2, P-14).

Accessibly was also defined by having cheap drinks, for example students can get hold of it in the local shops or university nightclub (SU bar) serves cheap drinks. In addition, being 18 and over makes it easy for them to obtain alcoholic drinks (P-10, P-14) and being underage makes it difficult (P-7). Students life is associated with parties, so having parties and been invited to them increases chances of drinking (P-8), also being treated with a drink (P-6). One student reported her having alcohol in the room

but she never wanted to drink and that accessibility does not make any difference if the person does not want to consume beverages (P-2). At the same time there were some suggestions from students they would like to have more clubs to go in Luton (P-14). On the contrary one student mentioned her living far away from the entertainment made it impossible to enjoy night life. Also, being underage is a barrier to be able to drink.

8.4.3.27 Acceptance. Money I used to earn when I was younger I could have paid for a house, without taking drink or drugs. Or paid for a car outright. Do you know what I mean? So … there is a lot of what ifs definitely in life even for the people who have not got addictive personality. They always question what if I did this what if I did that but yeah with alcohol being on the scene or drugs yeah I believe that's the key to understanding your personality because until you accept who you are as a person and you have got that addiction then you know you never truly move on to the next phase in your life do you know what I mean. (P 18)

8.4.3.28 Denial. P-18 mentioned about understanding oneself "I'd say they are in denial basically, yeah in some respects it is until they have hit a rock bottom and they have got nothing in their life and they have that epiphany because it would happen if they have nothing then they'd start to understand themselves a bit now. but they have got to go through it first so…" (P 18)

8.4.3.29 Personality. Personality seems to be defining the way people develop their drinking habits.

"If you are consistently working, you know if you are doing say for instance 7 till 11 at night or something like that that's fine but you know once you have not got that work where do you channel that next thing. That consistent cause you wona do that amount of work again you wona do something awesome but yeah you could quite easily become an addict with drugs or alcohol, because that drive you got on you know what I

mean? You look at doctors and nurses you know what I mean? They are always driven that's the key element of success really. But it also can be key element of failure. Yeah" (P-18). Personality characteristics of an addict was described in a following way "I think about myself and I don't care about anyone else's here but in that respect you know what I mean. That's what an addict is so... they are selfish self-centred and that's all they care about. So that would be me, but I think you have hit the nail on the head that" (P 18). P-2 talked about personalities "You behave differently and learn things before you go through them, but it works both ways, cause that person could live in halls and be normal and not live in halls and throw outrageous parties, I don't think it is really", (P-2)

8.4.3.30 Addiction. Participant 18 expressed his view about addiction and emphasised that some people would not realise they depend on alcohol as he experienced addiction. "This is the questions circles around feelings and settings that kind of thing, and it is all down to person's personality whether if they have got that addiction in the first place, does not matter how stupid you are or intelligent you are erm if you got that addiction you got it there is nothing you can do, … it is probably it is 3/4 of Britain that are like it, you know what I mean, there is only a select few that really don't take. Really it will because it is a lot of things people are not aware about, if you are not physically addicted it doesn't mean that mental addiction is not there, so for instance. That's funny one cause I went through it, I knew I was not physically addicted but when we used to go shopping with the children we used to go down the every bloody aisle shopping for what we needed and I used to be waiting just to get down that alcohol aisle and then once we got down I felt really happy cause I would get to go and get my 24 cans with 10 pound and go on and carry on doing the other shopping but there is a lot of people that will do that shop but as soon as they see the alcohol they got

to pick up something do you know what I mean or when they finish work they will just go off-licence and get a bottle do you know what I mean, people do not realise that's the mental addiction there same you got to have that do you know what I mean? It is not physical cause you can't your body can go without but your mind telling you, you need that, you want it do you know what I mean? so... It's interesting to be honest but …. Yeah you do have to channel it, yeah cause otherwise it can ruin your life, it is a gift but it's also a burden, (P-18)

8.4.4 Contextual conditions

8.4.4.1 Family, friends, colleagues/ familiarity of people and their expectations.

According to whom they are drinking with and how well they know the people, this can create a particular atmosphere to drink. Participants identified their close people to be the people who they would listen and whose opinion they would value. These people seem to be their grandparents, parents, siblings, boyfriend, close friend their childrenand pastor (P-5, P-6, P-7, P-8, P-10, P-11, P-19, P-20, P-21, P-23). Most of them mentioned people close to them would notbe happy with them drinking a lot and they would definitely express their concern (P-19, P-20, P-21, P-23). In relation to a child one of the participant said the following: "my son, I would not like to disappoint him in life, I want to live a good life, want to live as an example", (P-21)

Drinking seems to be different according to the context. With parents and family participant do not seem to drink a lot (P-2, P-19, P-21, P-22, P-23). They are in "chilling mood" (P-2) with close people there is no need for drink. One participant he is Greek told about him drinking more with family (P-11). They seem to worry more about keeping face with their parents and children rather than with friends (P-21, P-23). "Parents they won't be happy occasionally when Christmas, feels strange, I do not drink as much, I have 1 glass of wine, I do not want to go out of control", (P-23) and "I do not

want to be stupid in front of my family", (P-7, P-22). Participants mentioned that parents would not approve their excessive drinking (P-7, P-9).

In relation to drinking with friends, they reported the peer pressure to be a significant factor, they seem to drink to avoid friends pressure (P-17, P-18, P-19, P-20, P-21, P-23). Trying to fit in with the company was defined as a different factor (P-19, P-20, P-21, P-23). Another factor being with friends was about more opportunities to drink (P-14, P-16, P-19, P-20, P-21, P-23) or following friends (P-7).

"my friends they can definitely have influence and even work colleagues … I guess peer pressure", (P-20). "People I would like to be the same, partially to fit in, it is not really that elevating yourself to extend you are following", (P-22). Familiarity of people predicted their ability to say no (P-19, P-20, P-22, P-23). "…. then with my friends I can be stubborner and hold my ground ", (P-20). Being with less familiar people meant less alcohol (P-2) at the same time one of the participant reported having more drinks to feel more confident among strangers (P-23).

Being in relationship would mean less alcohol use and less nights out (P-11, P-13) "when some friend has a girl and have no time" (P-13). Two participants mentioned the importance of their mothers' care (P-2, P-14) which helps them to be safe and at the same time drink responsibly "I could ring her at 4 in the morning and she picks me up and my friends" (P-2).

they value the being drunk aspect over the consequences of it (P-1)

When participants talked about close people especially parents they mentioned that parent would not mind alcohol use but would be against frequent use or excessive use. The students were saying that if they lied with their parents they would not be drinking as much as when they live in halls.

"you know all the time and so you know they are not really strict" (P-1)

"then obviously they might be like what the hell you are doing, and you know obviously trying get me to stop but you know. I am careful I know what I am doing, and I am responsible really" (P-1)

It seems there is a peer pressure to drink as P-2 said "you would want to be the one who is not drinking in a drinking game", at the same she mentioned that she would be able not to take the pressure "In their eyes I was boring, because I would not drink with them" P-14 talked about peer pressure "when housemate goes come on let's go out –oh I ll get a drink as well then" or social expectation "it is weird not to have something in your hand"

Generation

It was mentioned that according to the generation people belong in there is a difference in drinking habits, P-2 mentioned being born in ninetees and not having that much information about drinking bt now more opportunities to see the concequences on television or on instagram which effects students drinking habits. Either there are "videos stuff like that glamorise it" (P-2) or on other side A and E programme on television showes the other side of it.

8.4.4.2 Location/activity/duration of drinking session. Participants mentioned about factors such as location, activity, duration of drinking session and that circumstances have an effect on their drinking in that particular session.

Christmas, birthdays, family get together, end of the year, beginning of the year, when assignments are submitted, summer holidays, going out, clubbing, dinner, funerals wedding and universities to be the time to drink (P-19, P-20, P-21, P-22, P-23).

"Christmas, assignments submitted. Birthday, family get together, when submit assignments, summer, go out, bar, clubbing", (P-20)

"…. what are you doing at a time, if you go to the restaurant you drink more, if you go for lunch at uni then less, circumstances definitely control how much you do or don't drink. If I have to go to work or have a social event to attend where I have to be sober those change as well", (P-19)

In addition, students talked about house parties, parties in private accommodation, house full of students, parties in halls, clubs, pubs, bars (mature). According to the place the are in it would effect their drinking. For example, in the house full of students it would be easy to organise a party (P-7). In places like bars and clubs, students do not get drunk as it is financially difficult but house party would make it easier to get drunk (P-2). In addition, that the policies set up in places seem to be related with students' alcohol use like noise restriction (P-2). As it was mentioned that current policies in halls does not allow having big parties in flats (P-2). At the same time students reported how easy it is for them to organise a party in halls when the friends are one door away and easy to make friends (P-2, P-5, P-8). Some mentioned having more freedom in private accommodation (P-4) at the same time one mentioned that there was no difference in drinking in private halls and accommodation (P-5, P-16). Having your own flat and house would allow more parties and consumption (P-13, P-14). Going to new places would predict more consumption as students talked about experimenting (P-11, P-21), especially if you are in a different country (P-11). Parents think halls is safe but it might be better not to go on halls the first year as it is increased use of alcohol (P-2). Some do not drink wherever they go (P-3). Living with parents predicted less alcohol use than being in halls or private accommodation (P-5).

Activities and events also differ, for example being at home and watching film would mean less alcohol use than attending freshers' week which is told to be more alcohol use for the students who do not drink much (P-3, P-8, P-14). Drinking games

predicted more consumption. As well as student who were involved in sports and watching football would drink more (P-3, P-9).

"If I am playing a drinking game I don't want to be the one who is not drinking" (P-2)

Couple of participants mentioned it depends on people not the places whether they decide to drink or not (P-1).

8.4.4.3 Number of people. It was clear from the interviews there is a relation between the number of people involved in the drinking session and the amount of alcohol to be consumed. Interviewees mentioned more people is more enjoyable.

"I don't know I think when you go out with friends like last time I was in a wedding for example then yes I would say sometimes it is just more company just more enjoyable", (P-1)

"if they like to drink you drink more with less people is it more mellow", (P-22)

Students drink more alcohol with big company as it makes easier to communicate with others and they do want to be in a way conforming (P-6, P-10, P-14, P-16), less people it means less consumption (P-10, P-16). Also if there will be more people persuading to drink student can not say no if it was one (P-10). In addition to having a big company having more people in the club also makes drink more (P-14).

"To drink more I think is, if it is like a big occasion and there is more of us if there is more of us in the group going out, I think you feel more of the need to not be the one at the party that's like no I won't have a drink, you wona be the life and sole of the party so I think when there is more of you going out you tend to drink more and also when there is a big group of you instead of getting single drinks you get a bottle, because it works out cheaper, and then you might end up drinking more because there is

a bottle right in front of you, you don't want to waste it, and you can't take it home so you end up drinking the whole bottle"(P-14)

8.4.4.4 Mood. Several states were reported in relation to peoples' mood. One participant reported mood to be a controlling factor of alcohol use (P-19) Good mood and enjoyment was reported to be more alcohol use (P-1, P-8), whereas "don't want to be there mood" (P-2) students associated with less alcohol consumption during hat particular event (P-2). Also sometimes when people were in a low mood it was reported to be effecting in a way people were drinking less alcohol (P-12). Mood seem to be higher when students were with the people close to them (P-2). They drink more with people close to them rather than with unfamiliar, at the same time, drinking with relatives were less than with close friends (P-2). In relation to having bad mood it predicted more alcohol use or not at all (P-11, P-12, P-14).

8.4.4.5 Enjoyment of occasion. Enjoyment also was mentioned by participants to be a factor to predict drinking. Enjoyment was associated with good music, good company, being fun and silly, and enjoyment of effect of alcohol (P-1, P-4, P-5, P-6, P-7, P-11, P-14, P-17, P-18).

"I enjoy alcohol with dinner, watching film", (P-19)

"Music, more lively, energy different, conversation is different, quantity is different, with friends 6 onwards units. With friends Ido not mind being stupid" (P-22)

Enjoyment was connected to limits people could handle alcohol. As if it was more than they can handle than it was not enjoyable anymore (P-13, P-18) as they talked about negative consequences they could face if they drank excessively it has like hangover lack of concentration (P-14).

8.4.4.6 Availability of drink/favourite drink. Availability of drinks or favourite drinks seems to facilitate the drinking (P-3, P-11, P-21, P-23)

"Sometimes I visit a friend and drink what she offers, it deepens on a brand, sometimes you drink what is available, specific brand you prefer. You find favourite and you drink it", (P-21)

"if alcohol is around I am prone to drink. It is fairly easy to binge drink. I drink spirits", (P-23)

P-11 mentioned some it would not be only the having a favourite drink but the enjoyment of music, whether the person is driving or

Oh depends on the what kind of drink it is and my mood, if it is shots of tequila, I might get tipsy I might get a little bit drunk, if it is Jagermeister which is my favourite drink I will be perfectly fine, and it depends the company it depends on my mood and depends on the music, so I have a lot of factors. If it like awesome music with good company and I ma feeling ok then alcohol might not get to me but if I am like depressed or the company is not good and I am bored, I might get drunk so it depends on a lot of factors. (P-11)

8.4.4.7 Year of study/ the group person belongs. Depending which years students were in the pattern of alcohol consumption differed. For example, first year students were more likely to drink more as they are usually 18 and it is the age to drink and the first year at university is associated with alcohol use (P-2, P-14). As being a first year they get invited to the parties and there are more opportunities to drink (P-2). Moving to second and third year students were less likely to drink much also third year was associated with being busy with assignments and final dissertation (P-15, P-20), also during first year and later they chose their friends and this also effects their alcohol use (P-14).

Also the following emerged from the data that first year students usually sign up for sports groups like ruby team or any sports team (P-6, P-14). These groups have

traditions to go to the sponsored pub in particular days of the week and consume alcohol (P-3). Whereas second and third year students do not usually drink as much as first years (P-5), as they do not belong to any sports teams (P-2).

It was reported that international students drink less as they are away from their home and look after themselves and are careful (P-14). It is not only which year students belong to but the friends they make and interest they had effected their decisions (P-2).

"it depends on the company you keep, because the way me and my friends were even a little drink we had that's not compared to some other people I have seen in uni, and then also that that's the thing some of those people I see I am like are you ok, I know them like from my course, I might talk to them, they might be, in the same society as me, but they are different" (P-2)

Sport

Students who reported being involved in different sports said that they would not be very interested in alcohol (P-1, P-3). At the same time students who are in sports teams tend to drink more than students who are not (P2, P-3).

I play a lot of sports, I am not sure if it is relevant, so alcohol obviously effects me in a big way. I might have a game coming up something like that and I have to be really fit for that, I go to the gym quiet a lot erm so obviously I want to keep that up, something like that, so you know, in a sport sense, it is quiet important, (P-1)

we always go on a Wednesday after our sports we always go to our sponsored pub, so we always go there and some weeks I won't drink, cause I don't want to, but if we have won a match (P-3)

8.4.4.8 Other people's drinking behaviour. Drinking of the people around you also affects students drinking in that particular session (P-2, P-3, P-5).

"Out of 10, if drinks around me, people I would like to be the same. If you are a person who drinks and you are around people who like to drink than you tend to drink a lot. It depends", (P-22)

"When everybody is drinking you tend to drink more. Less people it is mellow. environment control if everybody is drinking, everybody having fun, that's when you drink more, when 1-2 friends it is mallow", (P-23)

8.4.4.9 The way of being. Drinking is incorporated to British culture was mentioned by the participants as drinking has social aspect to it (P-1, P-2, P-20). One of the students mentioned of alcohol catered for everything at the university but it does not necessarily mean that all students are drinkers (P-2). Also university life away from parents usually wants to be experiencing student life whereas being mature student is different (P-15). Females drink and need less alcohol than males (P-14). Being belonged to sports group is about a lot of alcohol use (P-14). Although students are known to be drinking alcohol (P-7, P-14), students have no money (P-14). Being young is associated with drinking and enjoying life (P-1).

In the British culture t is socially acceptable to be drinking alcohol. "I would say it is kind of normal. Is it 8 units a day or a week?" (P-7)

8.4.4.10 Drinking alone

Drinking alone was not something to do according to the opinion of most of the participants (P-6, P-7, P-10, P-12, P-18). Some did drink alone and it was regular activity for them though not often (P-6, P-21). P-10 mentioned once he drank a lone as a consequence negative event he had a break up.

I don't drink for anything else and i don't drink when I am at home on my own, it is only when I go out (P-7)

"Sometimes I buy 8 cans of Stella and drink a week. When I drink alone it is different when I am drinking with people. If I am alone I can sleep off", (P-21)

Drinking alone was considered something not to be done on your own but with friends:

"May be, normally I don't like to drink alcohol erm only myself, just most of time I take the drink with my friends" (P-16)

There was an argument that some participants drank on their own "I d feel fine, not if I am a lonely drinker like if I am out and i drank that much, I d be fine" (P-2)

8.4.4.11 Religion. Participants added being religious which would effect their drinking pattern. Students who are religious would not drink much (P-5, P-9, P-12). According to what some of the student were saying that being religious would mean alcohol is not being consumed for coping purposes (P-17).

Firstly, I will pray and go to church or tell my mum about it, or I would tell my friends, or I would try and do it myself if it was very serious I would consider how I would sort out the problem myself or if not I would do the first three options go to church pray or tell my mum or a friend. That's what I would do. (P-17)

Yeah I am Christian and as a Christian you are not allowed to drink alcohol, but that is for the Christianity, but personally I sometimes If you drink and control yourself, I don't think it is bad because sometimes you have to like, your feed your body needs (P-12)

8.4.4.12 Culture. Several cultures have shown to be contributing to the behavior. The culture students were brought up in, culture of sports group at the university, culture of SUB2 (student night club)

One of the participants talked about her being from Caribbean background in which they start having sweet punch with the family around primary school age. The

drink does not consist of big amount of alcohol but mostly condensed milk. Older people and men tend to drink rum.

P: Like I said i don't know, may be, it is like you have to try Guinness punch is a thing where it is not, like if you give it to your child, I think size is smaller, if you give it to somebody in primary school, and they are not gona get drunk of it, cause majority is sugar and ice and you don't make it with Ice which is water, so it like one can of Guinness, majority of the tin of condensed milk, (P-2)

In Greek culture, also they do not talk about drinking age and teenagers get to try their drinks when offered by adult.

The culture of a sports team within university was mentioned by several participants. Students who are involved in sports teams are into drinking games and regular meeting when they consume alcohol in a sponsor pub across the road.

if I dont go to them I don't, I am not gona know, and most people don't go, cause they don't care enough and then in tap as well, the rugby boy kind of family culture thing, they have this song they sing like drinking game but, they sing this song and it is like, basically they sing all these staff and they go like coo coo and thy start counting and you meant to down the pint, or some mixed in a pint as well, obviously pint glass, and you meant to down it, until it gets to work out you (P-2)

In addition, the culture within student nights is also around alcohol as it was mentioned. Alcohol caters for everything.

And obviously between that they go to Liquid event stuff like that, erm but I don't know how the, I think the university, they accept they tried, but they wona try and get people in SU and lounge to make money, but the avenues they are trying like I said it is not about the music it is not about DJs but the alcohol promotions, they could substitute because I feel that I have done the sports team thing every Wednesday, (P-2)

I did the freshers angel thing and from being a third year what I have seen, and I have said to them but it is you are promoting to a portion of people the drinkers, you are promoting to a portion of those first years, which are the ones who drink, I am not saying that, I think they all do drink, but somebody drink more then others and some who literally be listening to one experience in a fresher's event the music was just dun dun dun dun, no words, no proper beat, just dun dun (P-2)

following it, we just think, the alcohol caters to everything, and even some of the lecturers have said we are not, like the era they have grown up in, that was the student life like, not wash go to lecture, get drunk and all that, we are not about binge drinking, most of us do work, jobs, not just weekends, have to work in the week, we get our work done we are from all different backgrounds, we meet all (P-2)

aiming for so it is not even a puberty age thing, it is how you consume it, it is whether it is on TV, cause my mum smokes, but to me I never seen when I was younger, it was more when I was in my secondary school, she would do it outside, she did not make it look glamorous, and she did not glamorise it she said she was ashamed, she started it young, but when you see on TV it is cool, like if you are out even and you see someone (P-2)

8.4.4.13 Environment. The environment showed to be contributing to students' choices in relation to the behaviour.

"Yeah, exactly. When you have grown up in the environment I have, erm you kind of get accustomed to it. But the variation with that though is that if I have not gone to uni (P-18).

8.4.4.14 Communicating messages and effect of social media.

P-2 mentioned about the way alcohol glamorized in social media and TV which was not the case when she was a child "Pretend with little candy sticks everything I just

say that alcohol the way they hold the wine or the brandy, and they sip it and it looks so cool and mature and that's what you aiming for so it is not even a puberty age thing, it is how you consume it, it is whether it is on TV, cause my mum smokes, but to me I never seen when I was younger, it was more when I was in my secondary school, she would do it outside, she did not make it look glamorous, and she did not glamorise it she said she was ashamed, she started it young, but when you see on TV it is cool, like if you are out even and you see someone" (P-2)

Most of the students mentioned about them not wanting to follow any health promotion messages as they consider it is not for them. It did not really matter if the person drank excessively or a little they would say that (P-14, P-15) "I would not (follow advice)" (P-15). "Erm, normally I don't know, I think because I don't drink drink a lot, I don't feel as if really applies to me. Sometimes when I see things like that I think "oh but I don't drink 2-3 units every day" so I don't really need to worry about that, and I think the only reason I am aware of things like units it is because I work with alcohol, erm but I don't it really applies to me, I mean unless I sort of started having issues with alcohol, I don't think I really pay that much attention to things like that" (P-14)

Students would follow which makes sense to them and if they can relate, for example P-16 highlighted the importance of advertisements about drinking and driving. Important don't drink and drive yeah, but when they talk about oh if you drink a lot of alcohol you gona have some problems with your … yeah I think it is good advice I need to follow it (P-16). Health messages does not seem to work with most of the students as they report about long term consequences "Yes, may be but so young so when I am older maybe follow, ok alcohol can upset my health and I will stop or limit it" (P-13)

P-7 said adverts would help to be conscious about the consequences “I think that would kind of like showed me what I may look like when I drink and made me a bit more conscious (P-7).

The messages sent at university seems to be around alcohol and freshers week is one of those. The events were reported to be promoting alcohol but not music or DJ as it is usually organised

“I did the freshers angel thing and from being a third year what I have seen, and I have said to them but it is you are promoting to a portion of people the drinkers, you are promoting to a portion of those first years, which are the ones who drink, I am not saying that, I think they all do drink, but somebody drink more then others and some who literally be listening to one experience in a fresher’s event the music was just dun dun dun, no words, no proper beat, just dun dun dun everyone in there was pissed, I have stand next to they like how do you go there, 'just go to get drunk', like this is the start drinking, for majority of the first years, that I have spoken to as well, because of that, it is not like, even if they themselves bypassed that uni event to go to another party where the alcohol they will be drinking but they will be listening to good music, they will be dancing, they will be socialising, whereas most of the university evnts pissed, that’s it, solely it” (P-2)

P-2 and P-18 cited that they are against promoting alcohol at university “Here cause they promote it in every university they all have student bar. The one thing have seen instantly is cause students are that stupid to go to that student bar and pay 3-4 a pint and get absolutely blotowed … no student money left after a couple of weeks, and I find it if they are gona promote drinking at the university they need to lower the prices … that’s the big massive concern of mine is not so much about them drinking because at young age like that they are not gona know you know, they are not really know

unless they have gone through terribly hard life, at the beginning then you know that they are just going out to have fun get drunk and try do things which all kids should do at that age, but the university in my eyes thats very strong opinion I have they are ripping of the students, erm, and making students absolutely skinned" (P 18)

"And people who say oh I do it because it is fun and it makes me happiest, like t is not everyday, that your life, like we said we know the health how it can affect your health your liver and stuff like that, and it is still there, it is unnecessary I don't see any reason it should still be here, just for the fact it was created" (P-2)

8.4.4.15 Experimenting. Experimenting emerged as a theme which is a reason student would try drinks when they are in a new country or new to university (P-11, P-12). International student said the following:

"The ones I have taken most times, what I drink is vodka, I don't really go to shop and start looking for special drink, I just do the this or this might be nice, I taste it and see how it goes, yeah, when I mean I take most 2 units. Some people go beyond that" (P-12)

8.4.5 Consequences

8.4.5.1 Avoiding negative consequences. While talking about negative consequences the participants mentioned about avoiding getting sick and avoiding loosing belongings (P-20). They also expressed health concerns as a result of alcohol consumption (P-17, P-18, P-19).

"It turns my stomach around, I cannot smell alcohol sadly it happens when I do not eat", (P-19)

Hangover was described to be unpleasant experience (P-18, P-22).

"Hangover is not the best", (P-22)

One of the participants mentioned about her being conscious of the affect of alcohol works as a barrier to continue to drink.

“it makes you feel sick, you can black out, it is dangerous, organs are racing, blood pressure is higher, not functioning the way it supposed to do” (P-23)

Avoiding going to the hospital was another barrier to continue drinking.

“I don’t want to go to GP or hospital” (P-21)

P-11, P-17 talked about consequences of drinking and driving as “you put yourself at risk but you may put someone else’s life at risk”. In addition, P-17, mentioned the consequences of irresponsible drinking can be criminal offence “I don’t want to see them in a jail or cell”, “hurt someone or damage the building”.

P-18 as he himself has gone through and experienced the following “anytime I had food I was sick”. “I felt physical addiction”, “suicidal thoughts”, “Stomach problems”, “and IBS”, “memory problems”.

“I never listen to no one. I had to learn the hard way. When I

started learning about things when my body became intolerant to it. You know what I mean. It was just saying I have had enough and it would make me ill. You know. So this is why I never took heroine for that main reason because I would have killed myself. Very simply. I would have killed myself on it. But its, how can I put it? With alcohol yeah you can't still kill yourself on it don't get me wrong, but first time I ever got drunk was when I was 14- 15. On my dad's 50th. And I was in the worst state imaginable. And I had only had 4-5 pints. ut it felt like a spinning a thousand miles an hour. you are laying over the bed being sick and you know. Then you poo yourself as you being sick all of those sort of staff. it is a learning curve as you go along it is progressive. Progressive evaluation until you have been through it you don't learn from it. That’s what an addict goes through. I can say that conclusively. Because I am an

addict. And for other people who have nor evaluated themselves they are still in denial. (P-18)

One of the main concerns were losing control (P-3, P-4, P-8, P-9, P-11, P-12, P-13, P-14, P-15, P-16, P-17, P-18) so participants mentioned as long as they could control the situation, their behaviour and language it is ok to drink.

"I expect to feel fine cause the more drinks the more alcoholic drinks the more my body is not going to respond the way that I wanted to and be" (P-17)

"Erm the similar with that person, is the limit, I can control it, I respect any person if they control it. If they want to drink ok 10 or more than 10 they can feel ok they can control their body or the language, that's fine" P-13

8.4.5.2 Drinking to cope. In relation to drinking to cope the students mentioned about alcohol use for coping with negative and positive emotions (P-18).

"I don't want to spend time with my ex cause used to have to share seeing my children with my ex that's one reason why ex-es are ex-es. You know you don't wona be even than it was very nice of her to let me see my girls in her house still very depressing and demotivating factor when I see my children. So I used to get drunk beforehand, yeah that was couple of trip is, depression sometimes, or when I get too happy (smiles) so yeah it is leaning how to control emotions (P-18)

To handle the event for example, break up (P-11, P-14) or overcome certain difficulties (P-5, P-1). Some students never use alcohol for coping reason (P-13). And mostly alcohol is consumed alone when it is consumed for coping purposes (P-10) or when the person is sad (P-10). In addition, students cope with study pressure (P-5) or avoid the situation (P-5). For some it was about being sociable (P-13) and handle that stress in some cases it meant excessive alcohol use (P-3, P-15, P-5, P-1). P-16 and P-13 reported they never use alcohol for coping or P-7 said it happens but rarely.

Difficulty yeah, for relationship I have drunk, for family losses, relationship problems, erm break ups just like that (P-11)

8.4.5.3 Staying safe techniques. The pressures students face and the trying to avoid negative consequences seem to equip students with certain techniques they can use to be in a better place. The students give more time to drink to help body to recover (P-8, P-18), they eat before drinking (P-11, P-19). During the drinking session P-2 gets rid of the cup or drinks water (P-2). P-14 and P-16 try to stay safe by not drinking at all. P-11 and P-14 have strict rules not to drink and drive. When a lot of alcohol is consumed the students they need to be with people they know and trust (P-8, P-9, or indoors (P-9). When it is getting late or if person is about to leave the party (P-8, P-4) it is not good idea to keep drinking. While drinking P-21 avoids mixing the drinks. If the person is getting drunk it is preferable to warn friends before he does it (P-10). P-14 and P-9 mentioned about the importance of being safe for the girls. International students do not drink as they are in a different country and try to keep safe (P-14). Do not drink when tired P-13 and do not drink too much and embarrass yourself (P-9).

"If I combine I am going to be drunk, I avoid that I do not mix. One evening I stand by one brand even if it juice. If I combine repercussions will be extraordinary", (P-21)

"I have 6 and more units but it is irregular and I have it with food so it does not have the same effect", (P-19)

"No, I did not think like that, because you can't just keep drinking because eventually I will pass out, and if you are not around your friends when you pass out then you gona be like on the street or something or wherever so, I mean unless you pre warned your friends that you gona get very drunk tonight in which case they should take

care of you. But I think I think it is just common sense you just don't drink until you can't move". (P-10)

8.4.5.4 Change. Becoming religious changed students drinking habits, they started drinking less. Change was also observed when they joined the university as accessibility factor made it easier for them to involve in drinking session. P-19 mentioned about seeing her parent drink and realising the concequences, she did not want to drink to that extent, so she cut down on her drinking P-18 cited realising his potential and learning about his personality helped him to come out of addiction "I think there are boundaries. I have basically got first class degree here you know. Not many people can actually say that and you don't get that for no reason that's hard work that's determination, yes it is part of my addiction as well but boundaries of that is I am getting an awesome job. I am gona learn a lot more things that I am going to like and getting smashed I just forget things very quickly. And my memory is not the best as it is I put my body through so much drug and alcohol where I do have memory problems" (P-18)

Appendix D

D.1 Invitation letter

Dear _____ (Name of the participant) _____

We would like to invite you to the focus groups on alcohol consumption of university students. The research will be conducted in the context of university and we will be exploring the factors which contribute to the behavior in this particular setting, as we are looking into the issue from the students' perspective as well as the staff's. The results of the research will be used to provide consultancy for the university professionals.

We are confident the outcome of the research will help to understand student's needs, thus assisting the professional to target particular areas while dealing with students, who are prone to drink alcohol. Students' perception, their attitudes and beliefs will be explored. In addition, motivating, personality factors and their coping styles will be entered into the equation as they showed to be significant contributors of the behaviour in previous research.

Each person will be asked to attend focus groups lasting no longer than 2 hours and with 6-8 participants in each group. You will be provided with information beforehand to guide you, so that you can contribute to the focus groups in a meaningful way.

Focus groups will be held in the following

_____(Dates)

_____

_____

_____ (Location)

Please contact the researcher on 078xxxxxxx
or dilshoda.sharipova@beds.ac.uk within a week to R.S.V.P to this invitation. We are positive that your contribution to the discussion and planning will be valuable.

Yours sincerely,

Dilshoda Sharipova

D.2 Questioning route for focus groups

Questioning route for the focus groups

Opening questions:

- *Tell us who you are, what department do you work at and what you enjoy doing when you are not working.*

Introductory questions:

- *What is the first thing which comes to your mind when you think of alcohol consumption of students?*

- *What is your experience of dealing with students who drink alcohol?*

Transition questions (key questions):

- *What are the factors which encourages students to drink alcohol?*

- *Do you believe that students motivated by personal factors or external factors regard their choice of alcohol consumption? What are those personal factors and external factors?*

Prompt: internal factors students' beliefs that alcohol can harm their health or making them relax, or external their peers approve their drinking.

- *How much are students affected by the prototype perception?*

Prompt: Do you think advertisements have an effect including actor indorsing to drink, or any positive image of a drinker would assist in that.

- *How much their past history of alcohol consumption effects their consumption now?*

- What are the factors that would encourage students to drink alcohol?

- What are the strategies students use to stay safe and help friends to do so?

Reasons to drink

- What reasons students give for their alcohol use?

- Have you noticed any pattern? What is it?

Policies and procedures

- What are the university's policies and procedures regards alcohol?

Interventions

- Have there been any interventions set up for students? What were they?

- What knowledge and skill do you think students need to stay safe? And what knowledge is communicated?

Support to staff

- What are the sources university uses to implement policies procedures? Can you give example of the organisations, any website, local authorities? Are they helpful?

- What more support do you need to deal with issue? Information? Support of university authorities?

Behaviour over time

- How alcohol consumption changed over time, if it did?

-Does alcohol affect men and women differently? What is the difference?

Decision making

- Who are the front line people at the university who find out about student alcohol misuse?

- Who are the people who are involved in promoting sensible drinking?

- What is the practice like? Give a scenario.

a) A lecturer came to you about one of his students who turn up to the lecture drunk, or with a hangover.

b) The student union bar issues a report student getting drunk. What would you do?

c) A night club issues report about a student taken to the hospital last night?

d) Imagine there was an incident in the halls of residence about someone who had too much to drink and was not behaving appropriately.

e) If the student comes with a problem, and you might be thinking of alcohol could be the reason for his problems how do you bring up the conversation and is there any screening tools you use? How do you define student problem drinking?

Student bar

- What is the effect of a student bar within university premises?

- What training is provided for the bar staff to deal with students who are drinking insensibly?

Living in a hall of residence or outside university campus

- How is the information communicated in the halls of residence?

- Are the members of staff supported? How?

- Are there any issues you would like to raise?

- What is the situation like to support students when they live outside hall of residence?

Communication between departments

- Is there anything you would like to say to lecturers? How lectures can help you to tackle the problem?

- What type of communication would you like to have with any other department that would help you deal with problem?

- How can communication be improved?

Ideas

- Is there anything you would like to add to what have said so far? Have we forgotten to cover anything you think is important?

Ending questions:

- Suppose you had a minute to talk about the authorities who could be in a position to make changes regards alcohol at the university setting what would you say off all the needs we discussed today.

- Would you mind give a feedback on the session today? It would help us to make it more efficient next time.

- Thank you for your participation

D.3: Consent form for focus groups

Informed Consent Form

We would like you to participate in a research which will investigate factors, especially types of motivation, involved in students' alcohol consumption. In case you would like to take part in the research, it will take from 1 hour – 2 hours of your time. We will ask you to take part in the focus groups during October 2014- December 2014, the time convenient for you. There will not be any risks involved in this study.

Sometimes participation in research can lead to distress. If any distress occurs please contact research supervisor andy.guppy@beds.ac.uk, If you have health concerns contact NHS on 111, or your local GP. In case you are having long term affect please contact your manager to be referred to Occupational Health Advisor. If you have any concerns about your drinking, you can call National helpline services –Drinkline on 0800 917 8282.

The participation is completely voluntary. You can withdraw from the study at any time you wish. You can also request for a withdrawal of your data after participation. All the information you provide us will be kept confidential.

If you have any questions, please contact us.

Andy Guppy
andy.guppy@beds.ac.uk

Dilshoda Sharipova
dilshoda.sharipova@beds.ac.uk

Please read the following statements carefully and tick accordingly.

I am aware this is a voluntary participation □
I understand that I have the right to withdraw from this study □
I have been informed in the information sheet the purpose of this research project □
I understand and believe that my confidentiality will be maintained □
I gave consent for the information I share during focus groups to be used for research reasons □
I give a consent for the focus groups to be recorded □

Your position at the university_____

Thank you for your participation

D.4: Additional thematic map for focus groups study

Table: 9.2 *Additional Thematic Map for Focus Group Data (specific research questions)*

Code	Description
People and organisations involved	
Frontline people	Frontline people who needs to deal with students alcohol use
Departments	Departments are responsible for students wellbeing
Local organisations	Local organisations involved
Communication	
Sources of information used to inform	Means use to gain information about alcohol use
Sources of spreading the information	Sources used my university personal to spread the information
Ways to identify excessive alcohol use (substance use)	Ways members of staff tend to use to identify excessive alcohol (substance) use
Ways to influence drinking behaviour (substance use)	Any means to communicate messages and influence the alcohol use behaviour
Communication between colleagues	Involvement of members of staff and communication between them
Communication between departments and local organisations	Involvement of departments and local organisations and communication between them
Communication with students	Communication between students and members of staff
Policies and procedures	
Bar	Policies and procedures in student bar
Welbeing team/student union	Policies and procedures in student union
Student halls of residence	Policies and procedures set at the university in relation to alcohol (substance) use
Within staff	Policies for members of staff
Knowledge	
Knowledge about students substance use	Knowledge of members of the staff about students excessive alcohol (substance) use
Student knowledge and acknowledgement of a problem	Students awareness of their own alcohol use and abuse and acknowledgement of the problem
Safety concerns	Students' safety concerns of university staff

D.5 Intervening conditions, contextual conditions and concequences emerged during focus groups

9.4.3 Intervening conditions.

9.4.3.1 Accessibility. Accessibility factor was discussed and according to the participants them being away from home for international students makes alcohol accessible “if they come from the culture where it is even not allowed to drink especially the girls. Suddenly let loose hair -we can have sex we can smoke, we can drink that must be a factor”, (P-3). P-1 agreed: “I think it is as well with accessibility completely so 100 % agree … opportunity to do it they realise that - it is a playground lets, go and play”.

Another sub theme was alcohol being cheap in the town in comparison with other neighboring towns, whether it is served in the bar or from the shop, it can be obtained very cheaply. “It really depends what stock we need to shift and obviously we can’t sell it under certain prices. So in Luton there is an agreement between the venues is a licensing agreement. It is not actually law. No drink should be under 1 pound I think. In Bedford it is 1.50. Bedford bars still comply with that”, (P-2). P-3 commented on price in the shop: “Even our corner shops are really cheap for alcohol; they are selling legitimately a pint of Stella for a pound, a pound for a pint who is gonna bother going out paying 2 80”, (P-3). P-4 added that the price is a good value for what they get: “That’s 5% alcohol, White Label l is about 12%”. Participants agreed that when it comes to a choice student make in regards to the entertainment, alcohol would be cheap and affordable for them.

Luton is a small town and can not offer various activities to do, or going to London is expensive, which restricts students in their choice of entertainment "depending on the geographical location certain things; so if you have got the accessibility to do things and I think I totally agree with you that working in the city I think these private entities and so on they all place themselves in the right locations in other towns" (P-1). Also having no job opportunities in the area leaves students with spare time which in away encourages alcohol consumption: "Luton being such a big campus the whole area is not millions of jobs going for everybody because you have a lot of people for 3 years. Those people continue to go back with the same employer, so sometimes work can be challenging for people to find", (P-1).

9.4.3.2 Finances. Since student expenses have gone up, accommodation and tuition fees leaves them with less disposable income (P-1, P-3), which is leading to more consumption of alcohol at home in order to save money. When students drink at home, it seems they drink more (P-2). "I found there is a lot more people who actually bring their alcohol in to accommodation. I think that there is a lot more let's- do- it- at-home kind of thing; lets save the money, you know. I think it is to do with the cost of certain things especially lifestyle and accommodation", (P-1). P-3 agreed that the price for the "and the accommodation" is affecting students' substance use behaviour. "Finance will result change of lifestyle" (P-1). Having less disposable income encourages students "if they go our they preload" (P-2), which was mentioned to be increased over last years. Another factor mentioned in the focus groups was economy affecting people's lifestyles. People try to save money by not going out and it started since "recession started in 2008" (P-4).

"Scary is it not?", (P-4)

"Nobody wants to go out", (P-3)

"Is that income related? I think partially it is. I think", (P-4)

"Probably", (P-3)

Having more disposable income would make it possible for the students to have their vehicles and travel as there is not much Luton can offer "you are sort of restricted to the town centre and all there is to do really go shopping or drinking", (P-2). P-4 agreed about Luton being isolated "Would it be any different if you went to the city where there would be lots of things to do", he also connected the wealth of the students being related more drinking as can afford it more "I do not know Nottingham university, there will be more binge drinking there then here because the student have got more money to spend. It tends to come from more middle class backgrounds", (P-4). Participants mentioned about drinks being cheap and not putting too much financial pressure to students and perfectly fit their budget "you don't have to spend a lot to get tanked up from some of these places", (P-4) and P-1 said "We had four-hour BBQ. We ran out of booze and also the food as well … and you know from cash and carry, from local suppliers nearby that you can go in and get a big pack … and they are still making their profit margins", (P-1). Local nightclubs have offers and "loopholes" people figured out to "get absolutely legless", (P-3). Alcohol is seen as cheap release, which students can afford "Yeah, I mean, it's fair to say, more students probably have more going on, outside of theses four walls- home pressures, family pressures, as well as studies, exams assignments… Finance has to be one. If alcohol is quite a cheap- why not", (P-5). "They don't have money but then a friend will come and give them alcohol. They don't think about activities (bike ride) that don't involve alcohol, they don't really need to spend money", (P-7).

9.4.3.3 Boredom. The staff observations showed that students drink out of boredom (P-1, P-2) "Boredom, a lot of people say so you have been out last night babe

yes, I saw you with a bottle of vodka and what you were doing.... Oh well I got time; I got bored - nothing else to do around Luton. That's the first thing I always get. Either that or it is a birthday", (P- 1), P-2 added "There is always a reason", (P-2), also added "is not like you have classes from 9 till 5 everyday so after you are tired or something you have classes of two days a week and then...", (P-2) leaves students with plenty time in their hands.

9.4.3.4 Policies and procedures. Participants agreed that smoking ban effected people's drinking habits as P-3 mentioned "I am not gonna go out then if I possibly can't go out - I cannot smoke. I was one of them. Then you just get into that habit of not going out anymore so I think that might be it", (P-3) to which P-4 agreed "True".

9.4.3.4.1 Bar. University bar and night club have their policies and procedures written up as it is requirement for the one of the schemes they belong to. They employ students in their bars so if the students do not turn up for work several times usually disciplinary action taken. "From the students' point of view we hire students in our bars and cafes and we have to go through disciplinary with staff members who came to work who had clearly been drinking", (P-2).

During the student night if anything happens they register it in an incident and accident report. It is worthy to mention that student night only happens once a week and it is difficult for the bar staff or the management to define any regular excessive use of alcohol. "If somebody happens that would go into incident or accident report or whatever needed, according to the next step", (P- 2).

"Well again, it's the requisition of drunk, isn't it? If a student is going out on a Friday one night a week, most probably not very wise to concern. So it would not raise a concern", (P-6)

"And they are adults so unless they are doing they are not supposed to be or they have gone over the limit so bar staff don't serve them what should you be doing", (P-3)

Disciplinary actions are taken if student being abusive, they would usually be removed from the area by the security. "And always having security present when alcohol is being served and we do have a safe space, so when if someone's being abusive or disruptive or offensive then they will be removed. Our students are entitled to feel safe in our spaces", (P-5)

In case somebody is injured medical help will be sought for the person or the ambulance will be called. "That would be a number of ways if they injured there would not be any action against the student would it, there would call ambulance sot the medical or health and safety staff if they have done something wrong there will be some disciplinary would not it?", (P-3)

It is only in extreme situations police will be involved. At this point the university authorities will be made aware of the incident. "I think in the past when there has been ambulance involved we would let you (welfare) know and John followed up in few things like they are all right you know afterwards, if there has been fights and police have been involved then they will deal with that afterwards and if it comes to it and if it is very serious and the university will need to know about it, and that effect their studies I am afraid and otherwise it is more", (P-2)

"If I imagine student going out every night of the week this one student was getting a lot more drunk than everyone else, then I'd say the management have a word with that student", (P-6)

It was mentioned that the bar and night club would have their policies regards prices set for drinks and offers. In addition, it is not encouraged to use 'drink as much as

you can' offers within the university nightclub. "I think I agree that the word 'safe' was used, it creates a safe environment and it's not the sort of thing they're gona do anyway, so it's far better for them to be protected where the prices aren't extortionate. We don't do silly things like attend and drink as much as you can", (P-6)

9.4.3.4.2 Wellbeing team/ student union. From the conversation it was clear that university does not have any alcohol related policies ether to staff or students. The action will only be taken if there will be a complaint after the university would follow it up and try to respond. "I don't think there are any; I think there are policies and procedures regarding consequences of drinking so there is complaints procedure in student disciplinary", (P- 3)

If the student recognises there is a problem only in that case university staff would be able to refer them to specialist agency or the counsellors within the university. "We don't have that many policies, the only thing is if anyone is recognised as a drinker to an extent that they've got a problem, we refer them to a specialist or agency to try and get agencies and people aware of what's available and we tend to deal more with more of the after affects or outcomes of drinking", (P-6).

In case if the incident occurred university staff, SU and wellbeing team would be following up the next day by ringing the student and making sure student is safe. "I'm not sure, but the ones I've dealt with…the report. In a recent report we were getting notified and then we follow it up by just ringing the student", (P-6).

In case of student hospitalisation or as it was mentioned before if the police is involved in the incident, the university key personal would find out, it was not clear how. "It did happen to me last year over a fresher. This was when I was working, and we were able to wake the student and he was vomiting so he was sent home. We went and checked on him when he came back. And yeah, I do believe someone in the

University had notified that this student was hospitalised. But the dean of that department knew straight away, so I don't know how the chain works. The University has an emergency phone. So whoever is contacted they contact back someone at senior level; they share the emergency phone", (P-5)

9.4.3.4.3 Student hall of residence. The policies and procedures within student village are the following. Switch off policy for the students at 11 o'clock. "They usually have they switch off policy sort of around 11 the normal time because we find that we need to encourage people to put it down got classes and people got placements so encourage people to start switching thing off inappropriate time after that we have security on the sites", (P-1)

Student village have similar policies like complaint policy, grievance policy, escalation policy. The students are allowed to use alcohol in the premises but without disturbing anyone. In case the members of staff notice any unusual behaviour or substance use, students get monitored. "We monitor so we everybody is allowed make a bobo everyone is allowed to do something wrong but we gotta learn from that change it around the culture that we have is that you don't have to be perfect let be compliant you know, if you have done something wrong it is not right I am gona say right now it is not right let's change it. We put in our logbook and security know to do inspections and used to just pop by smell the door listen see what's going on and we just monitor it because it is not fair for everybody else within that apartment or next to that apartment that should be impacted and I don't want to be coming out of lift and smelling eww", (P=1)

There were situations when students were making their own roll up in which case the items they used to make those which was used were confiscated and handed to police.

"We have a lot of confiscations substance grinders and all these different things when you making physically your own roll ups so on so we have confiscated we handed to police", (P-1)

In student village there is security on site and the manager who deals with disturbing students. If the person is getting out of hand they are usually taken to an 'emergency room' away from everyone. The person who is warned would e usually invited to have a conversation and if the things carry on s/he will e reported to a village director later to head of campus.

"If it is like persistent then we do obviously escalate it to the village director who will have an understanding everything going on during that period of time and sometimes it needs to be escalated to a head of campus services", (P-1).

9.4.3.4.4 Within staff. No official policies and procedures in relation alcohol use and misuse. Only within student bar and nightclub, they have a disciplinary procedure and the bar managers are not allowed to drink during the student nights, as they are licensees.

"Nothing official for staff is there?", (P-3)

"I don't think we ever had a problem in that sense, when we were on a night we are not allowed to drink obviously we are licensees we are responsible for the whole place and everybody in it", (P-2)

"But you were saying about students' staff that they were disciplined?!", (P-3*)*

9.4.3.5 Self. The reason students stay in and drink is about not wanting to go our as certain effort should be applied like dressing up and "all that way this distance but people get very lazy nowadays". P-1 added that students also choose alcohol over work "if I have to get on the bus to go to Dunstable. I can't be bothered with that so people would rather sort of going to brooks instead of over there and paying 7 pound for a

double why not 10- 15 pound for bottle of vodka and you probably get a lot more out of that so it is sort of like its versus finances with availability of everything".

Standing up for oneself was told to be positive personal characteristics to have as it decreases the chance of excessive alcohol use "Some people can resist peer pressure so I've actually got quite a lot of admiration for people who don't drink, because you've stood up for what you believe in and what you want. It must be quite hard to do", (P- 6).

9.4.3.6 Spare time. The participants talked about the students who work who would not have time to drink "Yeh, they just don't go out that much anymore. It does not mean they drink less and a lot of students have to work to support themselves now so they have to be more responsible they don't have these time between 2 lectures a week", (P-2). At the same time P-5 said contradicting information that "Yeah, I find the same. I did social care in Ireland, and the faculty only had like nine hours here whereas like there you would have for every one hour lecture you would have 2 one-hour tutorials, so you'd have 3 hours per unit and you could have 5 or 6 units, so you do do more hours in unit", (P-5).

9.4.3.7 Rite of passage. Members of staff described the use of alcohol use to be a transition period, when parents are not around and students tend to check the boundaries and see if they can get away with things. The time when they come to university "They realise that oh we have got oh it is a playground" (P-1). "Was it binge drinking because mum was not there to lock him out so accessibility and freedom all that kind of stuff?", (P-1). It is also about "to see how much they can drink", (P-6)

"Especially with people being away from home, then they're kicking the boundaries a bit, seeing how far they can go and what their right of passage is. Moving from one stage of their life to another and they've got to see where it all fits in. What

they can get away with and what they can't - seeing how much they can drink and how much they can't. Probably more than they're allowed at home", (P-6)

9.4.3.8 Belief. A member of staff who was involved in nightclub and student bar said that students are not interested in the evens which did not involve alcohol "For even when you think about it you do put things on other than to get drunk nobody comes", (P- 2) to which staff member from student accommodation said students should be encouraged to do something outside of drinking "Yeh, gets boring there should be things to do that is outside of drinking", (P-1). P-3 mentioned going out felt like an addiction "if I could not go out on weekend it was as if the whole world come actually crashing down". P-6 mentioned about students' beliefs "A lot of young people actually think that cannabis it is safer than smoking a cigarette" and there is cannabis use at university.

One of the participants mentioned student to have different belief on alcohol "I guess in terms of students you would just hope that it's a three year, 3-4 yeah experience and then they are not gonna carry on drinking the same way once you finish. But there are definitely different mindset about students drinking than there is around having drinks with your friends", (P-5)

P-6 believes that number of students who are abusing alcohol is small. "Only thing is then there is a better process and procedure for identifying that 0.1% of student population who may have a problem or wishes and they'd be identified and then put in the resources to help those people", (P-6)

9.4.3.9 Attitude. The participants agreed about the attitude students who live in halls of residence being different to the ones who live in a private accommodation, which is predicting their behaviour on the site when they get drunk there are more carefree and irresponsible. "I just wonder is part of it a little bit; I have a few who came

to me saying they can't tell me what to do because I pay my rent and I am entitled to do whatever I want to' so a little bit of that attitude but also a little bit of I don't actually live in the community, I live in this place nobody is really gona do anything if I make nuisance myself when I am drunk", (P-3).

One of the participants mentioned about student who are living in halls of residence. Students know it is independent living but at the same time they are in their safety zone, which is effecting their attitude about living in halls of residence "Yes, it is an independent life style it is an environment of support and I think that it is again it very psychological thing if you are walking down the corridor it is not a public area, even though it is because it is not, the people in the street and you are in that little area and when feel secure you feel you can just do anything you want. I have had exactly what you said Lisa when people say - oh well I pay my rent, I can do what I want. I have had people like that", (P-1)

9.4.3.10 Identity. Identity has emerged as participants discussed about students. Student identity is not clearly defined "It might have something to do with student Identity which is not of the worker not with their family so their identity is kind of a bit less clear to define", (P-4). According to P-4 having no clear identity the do not feel responsibility and free to do what they wish, which effects their alcohol consumption.

9.4.3.11 Job/responsibility. One of the participants mentioned about the students use of alcohol for coping with pressures/responsibilities of their life. "More students probably have more going on, outside of these four walls, so you might have; home pressures, family pressures, as well as studies, exams assignments… Finance has to be one. If alcohol is quite a cheap release", (P-5). At the same time jobs they have is not set and they are not committed.

Most of the students do not have high responsibility jobs making them less care about the job they have. “I suppose a lot of our students do not have a 'proper job', if you are on six pound an hour in some shop in the town might not be as disastrous as it is going to be Marks and Spencer’s manager in 3 years down the line”, (P-3)

9.4.3.12 Perception of drinker and non-drinker. Students who drink seen to be drinking to build confidence to make friends as they are young and do not have social skills to be feeling confident to make conversation with new people when they join the university. Couple of times members of staff mentioned the ones who try to “fill up” (P-1) are the ones who are extremely shy and they drink to switch off but the consequences are not usually good as drinking excessively leads to embracement and other complications effect on health (P-1, P-2, P-3, P-4).

9.4.3.13 Negative life events. “I think what we all wish and hope is that they get home safely. That’s the most important thing. As long as they are not harmed, or you know somewhere along the line if you drink too much you sort of, you can potentially die … just hope that they won’t carry on. Drink as much as you want, just keep it safe, isn’t it?”, (P-6). University bar staff tends to prevent negative events from happening. Hangover mentioned to be one negative consequence. “They should have as much alcohol as they have so that they have the worst hangover ever, and they will never do it again”, (P-7). There was a situation that student died after he consumed alcohol and was left outside the university in a cold day. In addition, P-3 reported students putting their career at risk by getting involved in unlawful activities “Historically things I was talking about earlier so students are getting done for drinking and driving and then their CRB disclosure come back and they get excited from their course. Mooning, drinking games in pubs do you remember a few years ago in Bedford”.

9.4.3.14 Person's expectations. Alcohol seems to be expected by students to be served during events.

9.4.3.15 Knowledge

9.4.3.15.1 Knowledge about students' substance use. The knowledge about students' alcohol/ substance use varied according to the department the members of staff work in. For example, career department did have any alcohol related instances, thought it was mentioned that students do not turn up in the morning appointments (P-4). "Daily, on a daily basis the only person I remember coming into our office drunk was one of the people who hang around in the area from outside, I do not ever remember seeing any students the worse for wear", (P-4).

The staff of students' village had more insight into the alcohol and substance use. For example, they are aware of "a mobile business" that supplies cannabis to student halls, they had situations when they had "a lot of confiscations substance grinders and all these different things when you making physically your own roll ups … we handed to police (P-1). P-1 added "we have noticed that there are some instances where students have been drinking which leads to drugs and it's also has implication on mental health and especially this last year performance".

Bar staff confirmed they get to see the students only once a week when there is a student night so they do not get to know the students well "We pretty much see them once a week", (P-2).

What all of the department members agreed was them having little knowledge about mature students. "We have a huge number of mature student conversations. They seem to relate to very young students mostly living in student accommodation. I am not sure if we have got a very good idea about other groups of students so mature students",

(P-3). P-1 confirmed “So post graduates are mature students we tend to not to have good understanding of”.

The members of staff believe there is 1% of the students who are abusing alcohol “Not sure I want a lot of change, really. As you were saying vast majority of alcohol and drinking is a positive experience and occasionally one or two will go to top on a beer or abuse other people which is not acceptable. But on the whole night I should think of students have a positive experience. Only thing is then there is a better process and procedure for identifying that 0.1% of student population who may have a problem or wishes and they’d be identified and then put in the resources to help those people”, (Participant 6)

The cases which have been dealt within student union and wellbeing team, only few was in relation to alcohol “But even though there has been enough taken cases, there are very few around the area of alcohol”, (P-5).

The participants were certain about the increase in pre-drinking“ (pre-drinking) is like 'I'm going to get so drunk that I’ll be drunk all night, without buying anything for 2/3 hours”, (P-5).“That’s definitely changed over the last few years, hasn't it - increased a lot?”, (P-6).

The participants mentioned about the sense of community among students and the members of staff always make sure the students are safe “Students tend to take care of each other if they come with friends, friends tend to take care. In that sense it is quite good here but obviously if it comes to it and when they are alone you have to look after them”, (P- 2)

In relation to students health and wellbeing the following was mentioned that students who drink led to drug use which “We have noticed that there are some instances that students have been drinking which leads to drugs and its also has

implication mental health and over the last especially this last year their have been from what I have seen cause I have only been with student village about a year and a half from within the last year the kind off incidences I have seen have increased with mental health so there are a lot of individuals and incidences it is very stressful to individual because they do not necessarily feel they have been changed health wise when we have had to work with families and the right people it is a very difficult situation it is a result of many different things combining", (P-1). Participant 4 said the following "I think Valerie Smith counsellor told me that there were number of students who had depression type symptoms as a result of overindulging", (P- 4). The following information was given "Different ones. We've got depressed students, some of them then they come for help and we are trying to help them. We've got drugs unfortunately, especially cannabis, we've got alcohol consumption, noise- a lot of noise, what else… Different ones. Damages are alcohol consumption. Yeh, they might kick the wall or they might break something in the room while they are under alcohol or under drugs", (P- 7). Drinking alone in the room was more concern "Again, I don't think anyone to my mind would flag up a problem drinker. So you expect this person drinking on their own in their room is more of a worry, rather than someone who is going out once in a week over to the sub and getting drunk", (P-7)

9.4.3.15.2 Students' knowledge and recognition of problem. Participant 5 mentioned about importance of accepting that the person is consuming a lot and ask for assistance will help in the situation. "And I think it probably goes back to housemaids as well, so that idea of if your housemaid drinks a lot, don't be afraid to come forward, you are helping them as opposed to them saying- I'm fine, I just drink what I want when I want. And that idea of not being afraid to ask for help of other people as well, they need to come forward themselves", (P-5).

9.4.3.15.3 Students' safety concerns. The concerns have been raised was about students' cannabis use, about a vehicle in front of the student village which provides cannabis to students, another concern students themselves make their roll ups. The concern was too much smoke on the site would make student village to remove the smoke detectors which would make it difficult to detect fire in case of a fire and the students in the student's village would not be ale to escape as it will take time to identify fire with tool removed.

There have been several concerns which have been pointed out. P-1 talked about supply of cannabis to students: "Directly outside the building there is one particular vehicle it is quite big it stands out I could not send off anyone unless it is on fire so. It is a mobile business shall we say and so it is brought onto campus it is brought in to accommodation and there have been incidents where people are running their own private enterprises whilst in the accommodation", (P-1)

There were some situations told by participant which showed how vulnerable student get when they have consumed alcohol excessively. P-4 recalled an incident in which student was in a vulnerable situation when "he got horribly drunk and he was wondering home over that side of town and some heroin addict got hold of him and took him to the cash point to get money every time he tried to escape the guy would beat him up eventually he did escape but he was beaten up and he could not escape he could not escape he did not have normal control of himself lucky to get away without being robbed as well you know that was gona get him to take all his money out pretty nasty story really. You expose yourself to a crime really", (P-4)

According Herald and Post a local newspaper Luton Borough Council's Trading Standards carried a spot check in some Luton shops and found 2 shops selling vodka which contained chemicals found in paint remover. One if the shops is in Park Street

which is where university is located. The incident was told by one of the participants too. “Even our corner shops are really cheap for alcohol they are getting a lot of these you see. Our local one was raided was customs and excise a few months ago I can only assume they are selling staff they are not suppose to be selling under the counter cause it is coming from somebody's ferry somebody's car even the staff they are selling legitimately a pint of Stella is a pound, a pound for a pint who is gona bother going out paying 2 80”, (P-3).

Luton campus has its own nightclub. The attitude of the staff for having a nightclub next to the university was positive as they thought bringing the events in house would help in keeping the students safe. “I’d prefer if we had a better venue so that we could bring more events in-house and provide further safety in terms of our own students”, (P-5). Whereas Bedford campus does not have a nightclub and students who would like to go clubbing have to go to the town as Bedford student village is located away from the town. “I agree with that because the Bedford is further away from town centre and not that safe to get to the campus on the town centre because it was dark when I worked there as well … I completely agree that if we would expand it or open a bar like next to the campus it will be little bit better for students”, (P-7) P-5 agreed “I think that is the main thing. You should be able to have fun and be safe”.

P-7 mentioned that some habits students adopt is by following their peers and trying new things “Because here they can, yeah. First is they have freedom, then depends on the company if they get together with people who take drugs … so you will sit with them, you will be like normal, and no I don’t want to try it … and one day you’ll be like- ok, I’ll just try it. Then after you try it you’ll get into this”.

Pre-loading has increased “We’ve all been saying certainly a massive increase in 'pre loading' and getting totally drunk before” (P-6).

The participants shared the information about the students who drink on their own in their rooms to be more concern, as they are very difficult to recognise. “If we're talking about students needing help with problems with alcohol, it’s the ones that are alone in their room that no one's aware of, and that they're drinking for the wrong reasons and they're not socialising. They're in their own world on their own, drinking alone”, (P- 6)

It seems that last a year and a half the number of students with mental health issues have been risen. In some cases, it was in relation to substance misuse. The increase was 5 times more than it was observed before, which is worrying “We have noticed that there are some instances that students have been drinking which leads to drugs and it’s also has implication mental health and over the last especially this last year they have been from what I have seen cause I have only been with student village about a year and a half from within the last year the kind off incidences I have seen have increased with mental health so there are a lot of individuals and incidences it is very stressful to individual because they do not necessarily feel they have been changed health wise when we have had to work with families and the right people. It is a very difficult situation it is a result of many different things combining”, (P-1).

9.4.3.16 Intention. P-6 and P-7 both agreed that intention sometimes students have is to get drunk “they can’t go out and have a good night without getting drunk”, (P-6) and within very short period of time “Some people are like ‘I have 30 minutes, I have to get drunk in 30 mins”, (P-7)

9.4.4 Contextual conditions

9.4.4.1 Economy. The participants have discussed about changes in economy to be a contextual factor. Since 2008 recession, many nightclubs in the area have closed down (P-2, P-3). “And now we are struggling to get people in; you can see even from

the big night clubs Liquid is closing down", (P-2). "Chicago's went last year", (P-3). People's habits of drinking have changed as it is more affordable to have a drink in the house with friends, or in university context to have a party in the hall of residence (P-2, P-3).

"Everywhere has closed. Either they drink at home, house parties, flat parties, sorry...." (Laughs), (P-2)

"Hall of residence parties", (P-3)

Economy affected on habits, there was increase in pre drinking. "I've been going out since I was 17 and even at home my friends would have usually gone to the pub to have a couple of drinks, then the nightclub, whereas now, there does tend to be a couple of hours when we would all meet at a friends' house so they could have some drinks first", (P-5)

Another participant talked about competitive environment in businesses putting strain on people and students as the price constantly increasing for services and goods. Thus creating the situation, when people do not have resources left for better quality of life.

"And there is a lot of inflation and there are external companies that come along and it is an ideal situation where you have got university sublet certain things out and they got the third party to supply to do something else which would then release their funds to invest in the actual facilities and recourses and all the things they have onsite whereas other people over there within the other nearby area that competition is gona go against that one so we can update our prices so they are competing everything is being competitive but not in such a way that is always the best for student or local or whoever may be, you have got an audience here they will pay it. They do that al lot of that staff and things are always inflated there is no reason why it should inflate", (P-1)

9.4.4.2 Course at university. Certain courses students do seem to be predicting their alcohol use. For example, sport students would drink more than nurses. This view was shared among 2 focus groups participants. The incidents, which were reported, confirm that the sport students are known to be drinking more than students in other departments (P-3, P-4). "I suspect there is quite a lot associated with sports teams you know traditionally rugby teams and football teams tend to drink quite a lot you might find it different pattern amongst sports players than the general students", (P- 4). "Sports students we had a lot of problems in Bedford".

In addition to before mentioned staff member in halls of residence talked about his observations of media students drinking more than nurses and postgraduate students. "We actually have a breakdown of different campuses and so on, breakdowns according demographics. I don't think it is the same if you compare it to media students with the campus in Bedford accommodation over there is I think even though it is smaller volume of accommodation", (P-1).

The explanation to why nurses drink less and more responsible is due to their course demands and the way it is set. The factors which are effecting are about nurses being in placements and their attendance being monitored. "I guess similarly lecturers would monitor especially professional studies like nursing or things like that where you are supposed to or have to show up. Lecturers would monitor those not turning up, so they have their own ways of then dealing with that as well. So, yeah", (P-5).

9.4.4.3 Culture. When participants talked about drinking being a part of culture they mentioned about British drinking culture, cultural differences, sportsmen drinking culture and drinking culture changes over last 10 years (P-1, P-2, P-3, P-5, P-4, P-6).

The historical events have been mentioned by participants confirming drinking has a long history within British culture "back hundred years you would find the rich

would get sloshed. In the sports and the poor drinking gin and penny a pint. You know London was rampant with alcoholism", (P-2). It is still a tradition to have alcohol "It's always amusing that when it's a really nice day, 'it's a good day for a beer garden", (P-5).

The views of differences in drinking culture was shared among participants. From the participants' perspective it can be seen that in UK people tend to drink more than I southern European countries "I think there is a cultural thing Northern Europeans tend to drink more than southern Europeans if you go to Italy you can not see the same number of people drunk in the streets at all. As you do in northern Europe I think in this country in particular it is about inanition", (P-4). The difference was seen in intention when other Europeans see reason to drink when see their friends whereas alcohol initiates the get together (P-2, P-5). According to the friends peolpe have their drinking "In my first year as I said everyday we had a place to go; we had a plan, did not even talk to my friends. 10 o'clock I was outside their door and ready to go, second year I got into a group of exchange students mainly from Spain and Greece and my second year was mainly house parties so but it was not all about alcohol", (P-2)

P-6 mentioned about sports group culture in which alcohol is big part of it "It seems like the impression of a rugby team. But it seems mainly, my sons that have been to uni, and that in uni they still carry that party because it's like a 'culture' ".

The culture is seen to be changing over the years, tolerance has changed (P-4, P-1) "I think there is far less tolerance of that nowadays looking at some occupations like journalism. Journalist used to do lots of their jobs in the pubs get stories, but no longer was I talking to the journalist the other day who was saying it is not like that anymore you can't behave like that I am sure some do generally it is not frowned upon", (P-4). P-1 shared the similar story "I came from travel background so you are drinking at 4

o'clock in the morning and you are ready to check in an hour later and a lot of people are at the airport, they had a big clamp down it is frowned upon so there is lot more lot rules and regulations and it is clammed down more, a lot of people are not as social like before", (P-1)

The culture change has been noticed in the university within university staff. "I can remember how supervisors encouraging meet and drink in lunch time and things like that. Years ago which is never get today I suspect part of that if you started going back to work with alcohol in your breath someone is gona notice, someone is gona say something, pretty quickly these days whereas in the past it was just acceptable", (P-4) and among students "It is very common place here we used to when I was a student we would have our seminars in Brewery tap, as soon as fire alarm went off that was it every member of staff was in the Brewery tap", (P-3). P-3 mentioned partly culture change occurred with the increase of international students in Luton over last 8-9 years "I have been here for 25 years and when I started international students were very small minority and it was a massive drinking culture so wherever you went in town the pubs would be full of staff and students. We obviously got very high numbers of international students", (P-3). P-2 agreed the culture changed "I have been here almost 9 years; what the student night used to be like when I first started", (P-2).

Although the drinking as increased, among students who consume alcohol pre-loading culture became very common now" Even if they do go out they preload, pre drink in the house then already get to the club drunk", (P-2) which leads to excessive consumption. People are not going out which changed the way they socialize "It is common pattern across the whole of the Luton community; it is not just students. I used to absolute party animal up until I was 45 I was out literally 5 nights a week. Everywhere was packed and everywhere was really lively and vibrant. Now you go out

everywhere is just like ghost town", (Participant 3). P-2 mentioned about the need of encouraging café culture "I man like from student union point of view commercial services the bar and club there has been declined across the country. The service is moving from the night time to the day time 'cafe' culture and things like that so it is all over the country it is not only Luton", (P-2)

Changes in the economy is effecting as well "It is also fear of redundancy for a lot of people I think that if you are getting a salary and a lot of this time the companies going to make that person redundant and that person redundant if you just take on these 2 people's jobs cause it is a recession you know we gonna we won't pay you anymore for it though", (P-1)

9.4.4.4 Location/place. Several subthemes emerged in relation to Location/place. Luton is not seen as "a great partying, drinking, sort of place", (P-4). In addition, participants talked about access to cheap alcohol and frequent marihuana use. "Our corner shops are really cheap for alcohol … our local one was raided was customs and excise a few months ago I can only assume they are selling staff they are not supposed to be selling under the counter", (P-3). P-4 said the following "Only a reflection really I just wonder if there is a substitution effect between drug and alcohol you mentioned drug earlier on, according to police there is a marihuana problem or it is not an issue every year Luton seems to smell even stronger of marihuana than the previous one. You only have to walk done the street and I am wondering if there is a cost issue here alcohol is expensive drugs have come down in price as a substitution effect I don't know".

Although Luton is not partying space "It is quite safe being in Luton; live in a student hall because it so central you don't even have to get a taxi home. If you are absolutely legless in the Edge or the Whitehouse you jus stagger down the road you

don’t even have to get a taxi do you so it is very central very accessible and quite safe environment”, (P- 3). Contradicting argument was presented by P-3 “Luton is such a small place has got quite a lot going on they usually art exhibitions activities and we have got a massive cinema we have got bowling”.

Alcohol is drunk at home or in halls of residence. Drinking in is raising more concern as students are drinking more. “I think people do take it at home it is not seen as much if it out and open in a bar or a club may be”, (P-1)

As a consequence of excessive alcohol use some areas in student residence getting damaged.

“It is very common to see someone with carrier bag 2-3 bottles of vodka and you have got friends coming in and so on everybody sort of on it with the drinks because the people are there at the time and they are using that space and environment especially kitchen areas thing get to get damaged a lot”, (P-1)

Student village is known as a party place. The place also associated with students trying to push boundaries. “I pay my rent I can do what I want”, (P-1). “I think the assumption is always that the halls of residence are always for the first year and it is just like everyone is going mad which it is partly true”, (P-1). “I am guessing if I lived next door to Fitzroy court I would be waken up probably happened so. I have a few came to me saying they can’t tell me what to do because I pay my rent and I am entitled to do whatever”, (P-3).

University has a student bar but the location of it is not good to run a bar. “The biggest problems we have in the lounge is location of it, and it does not get used that’s why it is running mainly as a coffee bar”, (P-2). P-4 agreed but he noted this is being a good location as “may be in terms of cutting down on drinking it is probably in a very good place, in terms of having wild parties, it is probably in a bad place”, (P-4).

University night club is open once a week and it is more appropriate place for alcohol use. “We have got two though, we have got a bar which is the lounge and we have got the night club SUB 2. I don’t know if SUB 2 is any wild”, (P-3). P-2 added that the atmosphere it has encourages students to drink “So SUB 2 they love it! Is their own little, it is not so premium proper they can do whatever they want; they get a little bit wild, have a good night out and then go back home so I think”, (P-2)

Lecture rooms are not seen being any good for any type of interaction in regards to alcohol as there are always a lot of people and they sometimes do not know each other and it is difficult for lecturers to identify any alcohol related issues “In some lectures you have 100 people in the room so they would not even know who you are”, (P-2). Whereas having tutorials or other type of lessons would be different issue “I *think* in terms of if you turned up to a professional; say if you were sitting in the sports therapy and doing massage would be difficult”, (P-5)

P 5 mentioned about the importance of having safe place for the students to socialize while they are at university “I think it’s a positive and its safer for students … We ensure we have enough security and our managers are very student focused so they would know. We are good to students in terms of looking after them in sports and things like that … it doesn't suit everyone to drink but there’s a huge market and it’s important for a union to supply that service they're 18+ and if they're not going to drink with us they'll find another way to do it so its about a social aspect as well, so meeting people and making friends” (P-5). “I think I agree and the word 'safe' was used, it creates a safe environment and it's not the sort of thing they're gonna do anyway, so it’s far better for them to be protected where the prices aren't extortionate. We don't do silly things like; attend and drink as much as you can”, (P- 6).

9.4.4.5 People (their expectations) and organisations involved. Under the theme of people and their expectations the following emerged. Peer pressure reported to be "motivating factor", (P-3). P-3 agreed with pressures to be "horrendous; it does not matter what age you are. I don't drink now and when I go out with my group of friends I still kind of fake … I will just buy lime and soda water so it looks like I am drinking vodka if they do discover that I am not drinking suddenly we have been having a great night someone will turn around and say oh you are so boring at 50 you do not expect to be under that pressure but it does not seem to go away". She also added "And it is funny how offended people get they say you want to drink and I say no thanks I am fine. They buy one anyway and I say I don't want it oh well I bought it now cost me 7 pounds! I did say I did not want it, well I can't drink anymore and it is like so much pressure and it took me years and years to be able to realise I am not boring if I don't drink". She noted hat the pressure increases by a round system but she was not sure if it was common among students "I was gona say the round system leads to ... when people buy round of drinks … puts you under pressure to drink more that you might want to whether students still engage in that I don't know". P-5 "Yeah I think, there are pressures, I mean; no one actually says 'You have to drink this' but if you were one in a group of ten, you may feel that pressure as an 18/19-year-old. I think the other thing that's quite funny, but it's an unusual thing about alcohol. P-6 agreed "drinking a lot is the round system that we have in this country, I don't think, it's a universal system, and you go then like the speed of the fastest drinker, don't you?". "I think the influence of a crowd would be pushing you and doesn't respect that she doesn't want to drink", (P-7). P-7 mentioned it is about fitting in "It's very much a matter of company. Because if they like to drink then there's nothing to stop them and sometimes if they don't then

they don't fit in and they're among people, then they could push someone to start drinking more and more rather than doing something else".

9.4.4.5.1 Frontline people. People who are in frontline would first found out about students' alcohol use were mentioned to be lectures. P-4 questioned "Do lecturers know students well enough to actually apart from not turning up or behaving extremely badly". P-2 carried on "In some lectures you have 100 people in the room so they would not even know who you are". At the same time P-3 asked if it would be lecturers concern to get involved "I should feel really sorry for lecturers, they are here to be academics and to teach. I know there is a little bit more to it if the student goes crying cause they can't do their assignment but that should be a referral thing", (P- 3).

P-4 mentioned about personal tutor to be a frontline person only if students decides to confine.

"I do agree the only additional factor is all students now have a personal tutor if there was anyone who might confined in it that would be a personal tutor if they felt, I' d image that would come from the student rather than from the member of staff, you know".

Member of accommodation mentioned about the members of staff who are doing night shifts and the security to be the people who would need to deal with the consequences of alcohol use"I think it is more apparent in the night hours anyway, you see the handover and all these happens at night the owls are out to play, yeh that's the first line, that's the first contact that we have either some wrong or there is something going on so you know, in our team a lot of them security wise they have been working on doors in the bars so they understand the people drinking and the drugs and that kind of staff and how to deal with them", (P-1). In addition, library staff and security in the university building would also be involved as university open 24/7.

9.4.4.5.2 Departments. The departments which are involved are counsellors “We would call Valerie Smith (mental health concelllor), mental health issues, she is very good and with welfare and so on , so if we have any difficulties or something and if we need we’ d require support and assistance and get a dialog”, (P-1), student union “We don't have that many policies, the only thing is if anyone is recognised as a drinker to an extent that they've got a problem, we refer them to a specialist or agency to try and get agencies and people aware of what’s available and we tend to deal more with more of the after affects or outcomes of drinking whether they've been evicted or they're not very clever” ,(P- 6) and “It happens so rarely, really rarely, it never just this person to be drinking a lot can you help, it is never that, student villages referred quite a number very small number though relatively small, criminal damage and student ended up being evicted cause of bad behaviour as a result of drink and then they turn up at my desk 20 past 4 on Friday and expect me to wave my one and say there is a room there that you can have so it is not just the drink as I said before it is a knock on effect it depends what is the situation is”, (P-3).

There are seem to be 2 teams who deals with students’ welfare: “So they (counsellors) work in the university and student support, whereas as we said the student union has its own welfare advice team so they are two separate... And we work together but the idea is that we are separate”, (P-6)

Student village staff would like to see more engagement of authorities of the university “I would love very much to do operationally how we can in cooperate a little bit more of the authorities because quite hesitant coming in. Sometimes they will only attend if there is something of the certain level for category of an instant”, (P-1)

Two participants mentioned about emergency phone which in their opinion was shared by key personal to inform about the incidents which happen with students either

it is in the university premises or outside “There is an emergency University phone, so that’s where that goes”, (P-5)

9.4.4.5.3 Local organisations. The participants talked about the local organisation involvement. The ones were listed, SOS bus, police, night net radio system, Luton safe network “Luckily I am now working day time I don't see too much anymore but obviously working in the event in the bar you do come across. There has been only one occasion I had to call SOS bus to help somebody home because the taxis would not take him and just to make sure he is ok in the first place. He had a little more to drink otherwise it not too bad”, (P-2). P-1 added “Blocking people from actually escaping from what we have worked with police there is more I would love very much to do operationally…”.

Both bar management and student village reported to have access to night radio.

“Yes we are part of night net radio system so SOS bus we have the radios which connects the whole CCTVs everything in town if there is any problems we can call in and say oh this person do not let him in to any pubs they did this and this and this or if we need help from the police or ambulance or anything we just can call it on radio …”, (P-2)

“And we have security at night we are in the same kind of bound with you can hear them going on CCTV, and you can hear them having a conversation so our security has had... oh we have kicked this person out they are not coming in, they been kicked out from this bar because of this and this we will hear that. And probably we sort of go oh we know that person and you can see people coming back and then kind of Gage”, (P-1)

In addition, one of the participants talked about the university having partner night clubs and their obligation is to report any incidence which happens on student

nights which can be once a week, not in any other nights “Not really, we have partner nightclub in Luton and Bedford, in Luton it was Liquid, one of their duties was to let us know if anything happened on a student night, so if it happened in student night they will contractually obliged to let us know, if it happens any other night and the student was involved we would often find out from different sources but they would not have to let us know so... obviously nobody wants to advertise they have had fight or they had something bad happened in the venue so you would not really have anybody to volunteer”, (P-2)

In some cases, university invites outside agency to deal with some individual issues. If the student prefers he has a choice to be seen by outside agency. GP was mentioned to be another body who would deal with alcohol related issues “No, we mainly refer them to an outside agency, some students may not want to be seen by a university councillor or service because they fear that it will get back to their tutor or department or something so if they are referred to us”, (P- 6). P-6 added “I think it’s not something we meet a lot it’s not often that students come to us and say the need help; because there's quite a lot of help and support from charities, authorities and also GPs so if you've got a problem that’s been identified, there are lots of places you can go. In fact, I think alcohol and drugs are the ones that have so much support out there and people with mental health issues don't have much help out for them, it’s a totally different board game”.

There are alcohol services in Luton and they get invited during inductions, James King project and NHS wellbeing team “Yes. The University and the SLS. We drink safely and again we tend to do general promotion. We have stools (?!) days throughout the year when we bring in alcohol services and we keep repeating the

message, really … the same ones I mentioned earlier, James King project, NHS well being team, and if any particular project is going on they contact us", (P-6)

9.4.4.5.4 People we work with. Student village reported working closely with parents "Within the last year the kind off incidences I have seen have increased with mental health it is very stressful to individual because they do not necessarily feel they have been changed health wise when we have had to work with families and the right people it is a very difficult situation it is a result of many different things combining", (P-1)

Mysterious phone seems to be shared within key personal and they get informed about the incidents and get involved. "But we do have a student who is at the moment in the hospital and it was not alcohol related. But the dean of that department knew straight away, so I don't know how the chain works. The University has an emergency phone. So whoever is contacted they contact back someone at senior level; they share the emergency phone", (P-5)

Counsellors especially participants several times mentioned about Valerie Smith to be helpful in communicating the mental health issues which occurred in student village "Or you can always call Valerie Smith and ask for help. Just to tell how you'd like me to approach this student…", (P-7) and P-7 agreed "To the university, especially Jane Smith she is dealing with difficult students". Two other names were mentioned one is counsellor another member of wellbeing team. "We work with the University in general. Jenny is coming quite often to our office with Jane Smith. We work quite closely with Alison", (P-7).

No of the participants mentioned about bar staff to be aware of students' alcohol use as they always monitor. "We own one nightclub but the external nightclubs, I do believe our managers check things like incidents and our manager on campus often goes

down to the student nights after hours to just see everything and make sure that its", (P-5) and "I think our managers in our BAR would be very good at that because they are quite aware and they get used to seeing the same student faces and their job I guess is to be more alert", (P-5). A contradicting opinion was shared by a bar member, they do get to see students only once a week and they would not be the ones who would be able to recognise a student with excessive alcohol use "We see them once a week", (P- 2).

Village director, head of campus, security, night manager, on-call manager and members of student village would be the people involved in tackling any issues. "We do obviously escalate it to the village director who will have an understanding everything going on during that period of time and sometimes it needs to be escalated to a head of campus services as well so they will be involved or again if it was a situation where we would need some academic support from the university they would need to become involved in that", (P-1) and "We have got security outside we also have a night manager as well so... If there is an incident on site, if there was a party that would be shut down if there are things they would be confiscated, the night manager will deal with it then", (P-1) and "With us, like we are informed and then we've got an on-call manager, he is available 24/7, so, calling on the phone, informing the manager and then we are following up on the students", (P-7) and "Of course there will be security, security will try to calm him down, if it won't work he will call the on-call manager who will come down and we will try to either put the student in the emergency room so that he will be isolated from the group of people, then he will just go to sleep. Or again have a conversation with him and try to explain to him how he behaves", (P-7)

9.4.4.6 Enjoyment or celebrating the occasion. Participants agreed that drinking is enjoyable experience (P-2, P-5, P-6, P-7) "It seem as fun I think ", (P-2). It is about celebration and period in the university "As students they have good times over

the years and when they first come back they haven't seen people for a while. Things might die down in the middle and the ends of terms and beginnings of terms and the end of the final term is a big event, so things like sports and end-of-year parties when people are leaving, I guess there is a sense of reality after a year and they wont drink in the middle of the week anymore, so in terms of trends as a union we would probably see that, and there might be someone before Christmas then coming back in the new year. Like different holidays and intervals because some of them are going back home and in terms of trends that's probably one to be aware of… ", (P-5) or "Most I think have a tendency to drink after big assignments and big exams, I don't think they say that they're going to go crazy in certain years and then subdued the next, it's just a reason to blow off steam. Regular student nights to go binging", (P-5) or "Freshers is usually a two-week thing (from Saturday to Fridays) so just short of two weeks but again there is alcohol served but I don't think on the nights that alcohol is served the idea is not about alcohol, it's about meeting new friends, we have comedy lounges and game nights as well as a arcade night and then after freshers there are weekly nights set in" ,(P-5). Drinking games seems to be common activity to be involved during parties "And I think drinking games is a big one actually because - as a non drinker and doesn't really bother with peer pressure. It doesn't really bother me, drinking games are something you have to remove from yourself. If you are in a room of twenty people, well, I don't get to play the games so sometimes have to be like, ' I wish I drank so I could play the game, so essentially, you are excluded", (P-5). P-5 mentioned it is common among young people not adult as much.

9.4.4.7 Drinking alone. Drinking alone seems was cited to be predicting excessive alcohol use. There were instances reported when students had mental health issues as a result of excessive drinking alone in halls of residence (P-1, P-6).

9.4.4.8 Communication

9.4.4.8.1 Sources of information used to inform. The participants mentioned using partner organisations websites, share ideas with colleagues on other sites. For example, staff of student hall said "I share ideas with other people across sites with our accommodation our company is an international business we have 4 different companies we run from and within this country we have 12 sites so from there we communicate with different people we all have our individual facebooks from each other", (P-1). Bar staff mentioned about using the good practice examples of other bar under the same scheme as them.

"What we try to do because we have we are part of 'the Best barman' scheme; we have their award. I remember I did look online and try to look at other venue and the places that have these already in place get ideas and just adopted ours basically otherwise not specifically any", (P-2)

Alcohol services in the community Luton wellbeing center and alcohol awareness are also being used to inform by student union members of staff. "Mostly alcohol services in the community cause they are local so they know the population quite well get recourses and bits and pieces of them and they are the ones they do awareness raising", (P-3). Also NUS "That's a good question, we are linked with the NUS but we use the resources on a number of other areas, I don't believe alcohol is one of them. We use them for housing advice we have a link that we use but alcohol is not one, I will look at that though", (P-5)

In relation to students' alcohol use members of staff of student residence hall and bar and nightclub staff get informed from the radio network and CCTV is used for the same purpose. "We have security at night; we are in the same kind of bound with

you can hear them going on CCTV, and you can hear them having a conversation so out security have had...” (P-1).

In addition, it was suggested that training for the members of staff would be effective way to deal with the situations faced in student village. In addition, P-1 suggested to have more CCTV “I think for me I would appreciate CCTV to be able to if there is an incident to actually record it a little bit more, to be a little bit stronger in our cases. For staff members may be self defence something like that, because when you are coming into contact with people who are not necessarily logical not capable of taking care of themselves and then we have to be the care takers, that we at least have basic principles of defending ourselves, defending our responsibilities as well as our own respect and safety, I think this a really good tool to have because it allows you to defuse the situation”, (P-1).

9.4.4.8.2 Sources of spreading the information. One member of staff talked enthusiastically about the work has been done using social media.

“And we are quite so, and the executives and myself in the team try to cheer things via the social media, so if there is maybe a topical or popular video around issues … I’ll contact one of them … put it on tweeter and facebook (I think), coz you are almost indirectly then, so it rather appears on their wall rather than having to go look for these things”, (P-5). P.6 added “Information-wise; lots of leaflets with information, the student union website offers information on drinking and the affects of drinking”, (P-6).

I contradiction to before mentioned posters, leaflets, university website, induction, facebook, tweeter which was reported not having too much effect on students. “If we look at the student respond to posters an adverts that we want them to pay attention to the answer would be they do not pay any attention to any of it, cause it does not matter what we put in a poster in a leaflet on the website we tell them in

induction any other way we have communicated with them apart from face book and tweeter they do not seem to take any notice whatsoever so I don't think either positive or negative images alcohol or I don't really think it has that much impact", (P-3).

Unknown source was mentioned by career advisor as well as during student interviews. "Fashion Yeager bombs became so popular I don't know if it spreads through peers someone tries it another groups tries and it just spreads, cider became fashionable again after being in decline for many years. I don't know there are networks people get messages about what is desirable to drink definitely but I do not know how they get those messages", (P-4).

Another way of spreading the information is training he members of staff receiving.

"Now you mentioned alcohol services one of the things all our bar staff gets", (P-2)

Students also tend to get training. "And then like I mentioned- training at the beginning of the year, I think that's good. And good group of students we reached around ensuring that they are drinking sensibly, but also not making freshers drink sensibly and getting the message to freshers that you don't have to drink unless you want to", (P-5)

Student induction was mentioned to be the only time students are informed about the services available. (1 to 1) "Yeah, the way inductions work now are quite good, so the students will start and they'll have (I don't know what it's called)..it's like orientation of sorts", (P-5)

The participant who talked about the induction week raised a concern that the students would not be able to have the information offered and it would be preferable to inform the students sometime mid year. "See, the difficulty with inductions is we

always find is at the beginning of the year when they are learning everything at the one time and service like support you don't take notes of it until you need it", (P-5)

Some members of staff raised a concern about students not wanting to receive the information as it is taking out lecture time. "Yeah, but at the same time you've got a problem that "oh, you are taking my time, so.", (P-7)

"You know we are paying £9000 fees now, I don't want you coming at the beginning of my class and take 5 min of my class time talking about your survey, I come here to learn" so, their needs I think must be balanced, probably of working closely with academics and getting that kind of balance", (P-5)

Staff members also have induction in which they are informed about the services offered for students and staff. "There are so many staff members as well", (P-5)

Staff of student village talked about their welcome packs being ignored. "In the accommodation giving them welcome packs with a bit of information about the university, about us as well, but most of them just don't read it",(P-7)

Emergency phone is also used as a source to chare the information "I don't know how it works, but the student who is in hospital now was knocked down and the next morning I emailed the dean who had already knew, so I don't know how that happens but there is something", (P-5)

Information is also spread by a colleague's conversation. "With us, like we are informed and then we've got an on-call manager, he is available 24/7, so, calling on the phone, informing the manager and then we are following up on the students", (P-7)

9.4.4.8.3 Ways to identify students' alcohol use (substance use). The ways to identify students' alcohol use was mentioned to be different depending where the student is. For example, within student village the members of staff found out

problematic drinking after having a conversation with the residents. Keeping an eye on them.

"Yeah have a chat, you know. Keep an eye on, yeah", (P-1)

"Asking somebody with the problem they tend to they reluctantly tell you".

The throwing a patrol when there was a complaint, monitoring was mentioned by student village staff.

"We have security which is on site; if we were to receive complaint we would throw a patrol and so on there is a lot of noise we attend and say it is a little bit inappropriate hour and let's turn it down everybody", (P-1)

The staff in student village support each other if they are not clear about the situation. "We offer support between ourselves if anything looks strange", (P-1).

Sometimes student village staff can clearly see through the situation or even sometimes students come forward and talk about it. "You either notice it very clearly abundantly clear or somebody comes in confiding you", (P-1).

Different to student village staff experience wellbeing team get to find out about issues by trying to solve completely different problem. "We might find out about it indirectly. Very rarely students come to us with that problem, but they come to us with another problem where they underline the reason behind it... so while dealing with that problem we might find out what's caused it", (P-6).

From the discussion it can be seen that some lecturers are good in referring student if there is a need. Another argument was lectures would only know if there is a problem. And one of the participants mentioned that lecturers would not be able to have any contact as there are many students in lecture rooms. "Yeah, I mean certainly. Some tutors and some academics are all very good at picking up and referring others not sure they know what services we provide and that we exist. They all almost on an individual

basis; some people from other departments treating not so good, so I don't know if you should hate …well, around that coz I'm just not interested", (P-6)

"Do lecturers know students well enough to actually apart from not turning up or behaving extremely badly, most lecturers would really be aware if there was a problem to be honest", (P-4)

"In some lectures you have 100 people in the room so they would not even know who you are", (P-2)

One of the participants mentioned about counsellor knowledge and skills to be able to assist students. Student should be ready and would want to receive help.

"So no doubt counsellors have ways of finding this information out thru their work", (P-4)

"Yes, and again, there is no point in referring someone if that person does not want to go, or that person does not want to be identified", (P-6)

9.4.4.8.4 Ways to influence drinking behaviour. The ways to influence drinking was awareness rising among students and freshers angels.

"We had to do some awareness raising in the last few years about behaviour and the possible impact it could have in career choices, through doing silly things when you have had too much to drink", (P-3).

"The one campaign we did which seem to get a lot of interest was giving student information about how many calories in alcoholic drink, vanity, anything to do with vanity seems to have more impact than anything to do with health because you are young and you are invincible and you think well I want to stop drinking cause I am only 21 and it won't hurt", (P-3)

"We do lots and have done lots and lots of awareness raising the stuff on the website we have done campaigns we have alcohol services in the community coming to

talk to the fresher's angels and the new students and new students when they arrive I am not sure if any of it has ever an any instance made one slight of difference I really am not sure if it has", (P-3)

There were no interventions but the alcohol awareness training.

"And they're not interventions, but they try to be active in terms of inviting people in, we have a group of students who help in between and there could be easily 150+ students learning so we also include alcohol awareness training, we are hoping to get those messages across; that training is quite good but not interventions. The training is meant to be student friendly and its basically just bringing awareness to the table really, they bring along props like, 'what has more alcohol content, this glass of wine or this pint?' Students are often surprised by the results and it makes them more engaged so we don't try to lecture, it's not our job to lecture students", (P-5)

The awareness raising not in relation to the student himself but being aware if their friend is safe too.

"It's raising the knowledge or awareness that out of your mates, you're trying to look after them ", (P-2)

"There is more interesting sort of nudge thinking nowadays if you say someone don't do it they straight go and do it if you tell them nobody else's peeing in inappropriate place", (P-4)

Some members of staff mentioned about sessions which could be organised for the students to build their confidence and self-esteem and workshops in which the skills could be taught to be able to say no.

"Learn to say no actually to have confidence", (P-1)

"Confidence and self esteem building may be", (P-3)

“I think it should be workshops; some kind of workshops getting students together and teaching them practical skills of how to actually say no I don’t want to and mean it and stick to it and some kind of scripts they can learn to get out of the situations”, (P-3)

“Confidence within themselves to say you know what no this is not for me. It is ok I enjoy company I don’t need to drink as much; I don’t need to drink like you or because a lot of people like go on … I think in groups especially people go all right go on than. I will give it a go but people need to learn to say no”, (P-1)

“Skills is having that confidence to be able to say 'no', isn't it? Whether it’s to alcohol or other things it’s always having that confidence and knowing how to say 'no'”, (Participant 2)

“Its not being afraid of people judging you”, (P-3)

“Yeah that’s right”, (P-2)

“In terms of knowledge, Yeah that would be skills; and in terms of knowledge, we mention where they say that it’s okay to have a drink and then follow that with a drink of water instead of drinking more, so you can drink but your drinking for yourself and not at anyone else's pace. I think that it requires confidence and if you drink a glass of water, you'd hear about it from everyone else in the group”, (P-1)

“It’s the not the easiest thing to ask for a glass of water is it?”, (P-2)

“No, I think maybe the idea that actually you're still drinking but you're doing it at your own pace”, (P-1)

“You should know yourself and your limit and when you need to stop”, (P-3)

One of the members of staff mentioned that teaching the dangers would not be a way to make positive influence.

“I'm not sure teaching the dangers is a way forward, because until you see it yourself you are not going to change. Advertisements on drink-driving; they're not nice to look at but unless you are actually experiencing it rather than looking at it you ere not going to really learn a lesson”,(P-1)

In relations to alcohol advertisement itself they seem to be seen as ineffective, but sometimes certain drinks get very popular among young people, for example lately it was yeger bomb

“Do you mean alcohol advertisements? It’s a difficult one, because it doesn't affect me, but I would say no. Because a lot of the time the 'good' alcohol advertisements include expensive stuff and they wouldn't be buying the expensive stuff. I don't think - for me - I've never heard a group of people saying, 'oh, did you see that new vodka advert"', (P-1)

“It wouldn't encourage you to drink or drink more, it could get you to change the brand, but I don't think so”, (P-3)

“Fashion Yeager bombs became so popular I don’t know if it spreads through peers someone tries it another groups tries and it just spreads, cider became fashionable again after being in decline for many years. I don’t know there are networks people get messages about what is desirable to drink definitely but I do not know how they get those messages”,(P-4)

9.4.4.8.5 Communication between colleagues. Support from the colleague was mentioned to be best ways to be involved and the way to identify the risky behaviour.

“People approach that about it really I think you can see certain things if you for a period of time we got a reception desk I came out I was talking to somebody the other day and there was one person sitting and she said Franco Does he sound strange? Look at that guy who is sitting there is he been strange. What do you mean strange? Just look.

I looked at him did look a bit strange he has been drinking. he has been on drugs or something so she was not sure so we just stood there and we observed a little kind of sort of kept an eye on him it was really difficult to gadge what it was, later it was like we moved on and he went to his apartment and then there was an incident that happened about 10 minutes later that transpired that that guy unfortunately had flair up some mental health problems relating to substance abuse and alcohol and so then those issues than flared up so we obviously intervened and managed to get everything sorted what we could and it was challenging though because the thing is we got to balance it, are you just pissed or is there something else there, is there something more underlying. Because you know we have got that line and we got to try to understand it, we got the culture of like I am not sure can you help me with something so we offer support between ourselves and it is it is strange", (P-1)

9.4.4.8.6 Communication between departments. From the conversations it can be seen that student village staff is working closely with counsellors.

"I think if there is something to do with an intervention and if there was something which was excessive that required additional support we have got relationship with university where we can actually, I have something here you pick up the phone and you call people. I have this issue- would you mind to pop over, we have little chat about it, can we do something", (P-1)

"We would call Valerie Smith, mental health issues, she is very good and with welfare and so on, so if we have any difficulties or something and if we need we d require support and assistance and e got a dialog", (P-1)

"We work with the University in general. Jenny is coming quite often to our office with Valerie Smith we work quite closely with Michelle we work closely", (P-7)

Bar staff are more likely to use external organisations.

"I think on nights straight away as I said SOS bus, local authorities, ambulance, police whoever is needed they are there and when it come to the follow up things like that we normally hand it over", (P-2)

Well-being team only gets to know about incidents after they have occurred and need to deal with them.

"It happens so rarely, really rarely, it never just this person to be drinking a lot can you help, it is never that, student villages referred quite a number very small number though relatively small, criminal damage and student ended up being evicted cause of bad behaviour as a result of drink and then they turn up at my desk 20 past 4 on Friday and expect me to wave my one and say there is a room there that you can have so it is not just the drink as I said before it is a knock on effect it depends what is the situation is", (P-3)

It was not clear from the discussion how lecturers are involved in the process.

"I should feel really sorry for lecturers, they are here to be academics and to teach I know there is a little bit more to it if the student goes crying cause they can't do their assignment but that should be a referral thing it should not be really down to lecturers to stand up in front of the group of students and say 20 of you did not turn up last week case I guess you were all out, I don't really know firstly what they can do if they are expected to do anything students than have different perspective why that lecturer there for", (P-3)

One participants have expressed what would be preferable of a lecturer to do in the instances where s/he concerned about student's wellbeing.

"If it was personal tutor they may be concerned may be it has happened more than once it has happened many times that kind of staff I think if they approached another member of staff and ask I am not sure about it and I think it brings up a

discussion about this you brought to my attention why you know we have a conversation about it and if it needs to be sort of like what do you think we need have a little chat if everything is ok then you just say you know you can suggest if you gona go back and that you have that relationship and you have got interface with that person do you may be want support someone to be there with you and sort of wanted to raise something cause I am not sure and I wanted a little bit, is there something wrong and that opens things up and then it need to have something escalated", (P-1)

One of the participants mentioned about 1 to 1 communication to be more effective among departments.

"There is always a way in, once you know where to go, the next step is then to know them face to face, isn't it? So if you've got a problem you send them and email or give them a ring and initiate a quick chat and that's so much easier to resolve the issue rather than over an email", (P-6).

9.4.4.8.7 Communication with students. The communication when there was an incident on site sees to be more structured.

"It is all followed up on the following day we make certain steps and actions, where we would call that person in discussions meeting and depending what the circumstances would be it there was an issue than we would discuss that further with that person individually on alone to one bases and that would be a formal meeting to say that you know you have conducted yourself in this fashion it is not appropriate and the majority of time people kind of get it and they do it and if it is like persistent then we do obviously escalate it to the village director who will have an understanding everything going on during that period of time and sometimes it needs to be escalated to a head of campus services as well so they will be involved or again if it was a situation where we would need some academic support from the university they would need to become

involved in that as well so we will have sort of you know, we give you straight, policies if you have done something wrong lets discuss about it and if it persistent then we need to discuss it further we need to put things in place", (P-1)

It is not only when students approach there are sometimes situations when members of student village encourage students to open up if they see or notice anything which would catch their attention.

"I think if anybody had someone having to contact with and I have asked this question before. Have you been out last night so I do it in a bit like informal bases and I try to gauge I ask mums' questions cause mum always get to the root of it and I know that cause it has been done to me so (laughs) when mum asks you something - have you been drinking? What happened? Did you go out last night? Where did you go? Who did you go with? You ask series of questions and you try to get that person actually open up a little bit more and you find out you know if there is a problem or if there is a situation and 9 times out of 10 if you are asking somebody with the problem they tend to they reluctantly tell you but they tell you or they tell you in round about way and you know sometimes that sort of you know how much do you drink and we get to that point that person knows that I know and I am asking and you need to give me a little bit to help you", (P-1)

"It is just communication really, if you communicate and you have got a relationship and it is one of necessarily authority, because in our line of work even though I do tours and we do events and so on I still have a line of authority whereas you are mashing up my house now, Why? They be like ok ... and then you have that communication and you open it up", (P-1)

"You make people to understand that if there is a problem tell me what the problem is, if you gona be naughty I am gona make sure you are not naughty anymore", (P-1)

"I think you can closely talk to the person. To be friendly, yes. In a friendly way. And try to fish out the information if he actually has some problem", (P-7)

"Yeah, we've got enough security who inform us with any incidents that happen at night, and they were having flat meetings with students and trying to, at first have a conversation with them and find out what happened, why it happened, explain to them the consequences and if we see that the student needs help then we go through university", (P-7)

Having good communication skills seem to be crucial while interacting with students.

"If they come to you with that problem, you just talk of it, don't you? You just sit down with them and then well, everyone is different. It depends on how long you had been working with them, how well you knew them, how forthcoming they are… you know. Person asking question-their communication skills, you know there is no one way of this like is the way to do it or this is not the way to do it. It depends on so many things", (P-6)

While talking to student's t was mentioned that it is better not to give wrong advice and members o staff need to know who to contact if there is a need to refer the student.

"I think it's more to know who you contact when you need help in certain area. The most important thing is to know who to contact", (P-7)

"And don't give them wrong advice if you don't know the answer. There is someone in the University who does", (P-5)

Effective communication

Student village staff talked about the communication they encourage it was mentioned to be openness and respect. “We understand that there is a social aspect to university we appreciate it and respect it so if there are so if there is a birthday or there is a cultural event something like that. If anybody had to have some larger group of people coming in to visit like guests if anybody wants to use social spaces for a birthday or event, we would well come it. As long as we have prior notification; we know what is going on so therefore that we can be respectful mindful what’s going on so there is a party in one of the apartments no problem that’s ok. If we were gona go on a petrol we know that we don’t need to shut things down because we authorised it with other people in the office we encourage openness and respect”, (P-1)

He added that the students need to be allowed independence.

“You got allow independence”, (P-1)

“I think we ‘re all really in such understanding of we are all here to do the same thing and we gona make sure our care of duties and responsibilities, we actually want to be responsible and we want to help people and some people do that help, cause some people do not have that understanding within our teams and communities we built up the relationships we built up that we are all open and listen, I am not sure if we can do it”, (P-1)

Student union member thought it was more effective to speak to students rather than providing the posters and leaflets about the services provided at the university.

“Yeah, and I think that’s why it is better to speak to people because what you can tell them in 2 minutes might be on that piece of paper they’re never going to read”, (P-5)

Unless students see it as wasting their time. “Yeah, but at the same time you’ve got a problem that “oh, you are taking my time, so...” , (P-7)

Not very pleasant advertisements about drinking are not pleasant to see but at the same time o not have a positive effect on people. Unless they experience any negative experience they are not going to follow as it was told by one member of staff. “I'm not sure teaching the danger is a way forward, because until you see it yourself you are not going to change. Advertisements on drink-driving; they're not nice to look at but unless you are actually experiencing it rather than looking at it you are not going to really learn a lesson”, (P-5)

9.4.5 Consequences

9.4.5.1 Avoiding negative consequences. Avoiding negative consequences, necessary precautions were taken to avoid negative consequences while being in student nightclub where drinks are not served to student ho had enough or there is a limit in shots which can be served at ones (P-2), or bar staff always follow certain procedures to keep the students safe (P-2). In regards to the incidences happened with students as a result of alcohol, educational posters or leaflets seems to be distributed after the incident (P-3). In order to keep students informed there are local charities and organisations invited during induction week (P-3, P-6)

9.4.5.2 Negative consequences. P-3 mentioned about stereotypes people have about students “blowing their students loans”, she mentioned it is not true as “a lot of students don’t even drink”, (P-3). A contradicting idea was shared by another member of staff in which he talked about his experience of debt management within student accommodation services.

Three members of staff shares their views about consuming alcohol makes person unreliable (P-1, P-2, P-3). They do not turn up for work or are late for their

appointments. “No direct impressions from my work, except people don’t turn up for their 9 o’clock appointment in the morning and I am sure for some of them may be suffering”, (P-4).

Some of the situations mentioned about the student alcohol consumption affecting their future careers. And in some of the situations it might be the case that students who are studying particular disciplines might not be able to continue their careers as they will not able to go trough CRB disclosure.

“Sports students we had a lot of problems in Bedford historically, I was talking about earlier so students get done for drinking and driving and then their CRB disclosure come back and they get exited from their course. Mooning, drinking games in pubs do you remember a few years ago in Bedford”, (P-3) for which university “We had to do some awareness raising in the last few years about behaviour and the possible impact it could have in career choices” (P-3), which was response to “doing silly things when you have had too much to drink. In Bedford we had students mooning and exposing parts their anatomy which used to be hilarious and it did not used to be a criminal offence but it is now if you are teaching student or social work or nursing student and you get cautioned by the police or worse that’s it that’s your career over so we had couple of those”, (P-3). P-6 expressed the same concern “they have been evicted by private landlords … they don't realise the effect it will have on their carers … they don't appreciate the impact that can have on their whole life”, (P-6). P-5 was concerned about “that will have another impact on them when they start applying for a job”, (P-5).

Following have been mentioned by the management of bar. “We had a few people peeing in the corners in the club … people tend to get a bit like you say brave, aggressive get in a fight, over think things … obviously all being too drunk and not being able to control themselves not being able to walk”, (P-2)

Couple of people were saying that the incidents happen very rarely P-3 from Student union as not all the cases get reported "It happens so rarely, really rarely, it never just this person to be drinking a lot can you help, it is never that, student villages referred quite a number very small number though relatively small, criminal damage and student ended up being evicted cause of bad behaviour as a result of drink", (P-3) it seems members working in halls of residence are facing more alcohol related situations as accommodation services and university are run by different companies and the incident needs to be at a certain degree to be reported to university (P-1).

"I've had a lot of experience as a non drinker when I go out with these people I see a lot and remember it all, it's not always negative … I think students go out and drink with the intention of having fun, I would like to believe they don't go out with the intention to turn malicious or turn Angry … they might need to be taken home. It's not always a nice sight seeing vomit or anything. I think there are a lot of pressures on students so maybe it's that once a week they get to let go … if we have had only one incident in one year then it's not all bad", (P-5).

In relations to the negative consequences students experience staff of halls of residence reported a number of them. By the facts were presented the immediate effect of alcohol is seen by the staff of halls of residence more than any other department. One of the main concern was students suffering mental health issues in relation to substance use. Mental health issues were mentioned in both focus groups and the concern was increase in mental health issues among student in the last 1.5 years (P-1, P-4, P-7).

"At least mental health issues have risen like a few years ago would have 2 cases and now we would have 10; so the more you drink you get these thoughts and you can get depressed and everything so that's how students even take pills, then they'll try to kill themselves with alcohol inference, so it's all linked up", (P- 7). Mental health is not

only increased as a result of excessive alcohol use but as a result of drugs too: "... look at that guy who is sitting there… He did look a bit strange as he has been drinking… he has been on drugs or something … It was really difficult to gadge what it was, later we moved on and he went to his apartment and then there was an incident that happened about 10 minutes later that transpired that that guy unfortunately had flair up some mental health problems relating to substance abuse and alcohol and so then those issues than flared up. We obviously intervened and managed to get everything sorted what we could and it was challenging though because the thing is we got to balance it … is there something more underlying? Because you know we have got that line and we got to try to understand it, we got the culture of like I am not sure can you help me with something so we offer support between ourselves and it is it is strange", (P-1)

In addition to health issues some other negative consequences mentioned were: damage, verbal abuse, and physical altercations, sexual assault, drugs, unauthorised people on the site, noise (P-7, P-1). "you have got people staggering in. I think damaging things along on the way because they tend to get brave when they been drinking and I think the largest problem that we have by those who stay in because they are actually drinking more than going out … kitchen areas things get to get damaged a lot. There are a lot of unauthorised parties. It's time to switch the music off now. A lot of verbal aggravations. Unfortunately, sometimes it is directly to our staff member … there is abuse verbally we have had physical altercations. There is a lot of incidence relating to sexual assaults, drugs, unauthorised people getting on the sites, jumping fences, getting people in. There is a list there many social things … we do become involved in a bit more social aspect of the community", (P-1)

Several members of staff shared the stories students faced being in of alcohol. The stories are alarming as in one of the cases student was exposed to crime and

fortunately was unharmed and the second situation student died was frozen at night (P-3, P-4). “he got horribly drunk and he was wondering home over that side of town and some heroin addict got hold of him and took him to the cash point to get money every time he tried to escape the guy would beat him up eventually he did escape but he was beaten up and he could not escape … Lucky to get away without being robbed as well you know that was gona get him to take all his money out pretty nasty story really. You expose yourself to a crime really”, (P-4). We tend to see really extreme stuff and we did. Unfortunately, very sadly we had a student die a few years ago. Fell asleep and died of exposure so very extreme”, (P-3)

9.4.5.3 Drinking to cope. Drinking to cope emerged as a theme “You feel more confident and it settles you and it allows you to feel a little bit more you, take that worry out of you and I think somehow people who drink have worries” (P-1)

9.4.5.4 Change. Participants agreed that smoking ban effected people’s drinking habits as P-3 mentioned “I am not gonna go out then if I possibly can’t go out - I cannot smoke. I was one of them. Then you just get into that habit of not going out anymore so I think that might be it”, (P-3). Starting university was cited to be causing change “In my first year as I said everyday we had a place to go; we had a plan, did not even talk to my friends. 10 o’clock I was outside their door and ready to go” (P-2). The culture change has been noticed in the university within university staff. “I can remember how supervisors encouraging meet and drink in lunch time” (P-3). P-3 mentioned partly culture change occurred with the increase of international students in Luton over last 8-9 years “I have been here for 25 years and when I started international students were very small minority and it was a massive drinking culture.

Appendix E

E.1 Table 10.1

Table 10.1
Integration of the Results of Studies

Theme	Variables used in quantitative study	Examples of quotes from interviews illustrating the theme	"Examples of quotes from focus groups illustrating the theme"
Positive effect on health, body and self		"Helps with falling asleep"	"To have confident feeling to make friends, to talk to somebody and not be somebody in the corner, when they drink they feel brave"
Negative effect on health and body and self		"Skin starts to break out"	"There were number of student who had depression type symptoms as a result of overindulging"
Positive alcohol expectancies	Expectancies	"Relax mainly that's what I use it for"	"If they are on their own and they have not made friends, you got a lot more filling up faster, to feel integrated"
Negative alcohol expectancies	Expectancies	"Might be involved in an accidents at home, anywhere"	"Some people can be aggressive, some people get depressed"
Escapism	Drinking to cope	"It helped dealing with positive and negative emotions"	"It settles you… you take that worry out of you"
Age	Age	"18 is a quite a landmark of adulthood"	
Lifestyle changes		"I have 2 jobs now and I am in a mind frame where I earn not spend money"	
Responsibilities		"Assuming most people have a lot of	"More students probably have more

		things to do like school, work, dissertation”	going on, outside of these 4 walls, so you might have: home pressures, family pressures, studies, exams, assignments”
Information knowledge		“Videos staff like that glamorize it”	“We have noticed that there are some instances that students have been drinking which leads to drugs”
Future self/role model for children		“I have children. You cannot demand from the children the behaviour you do not possess”	
Self/self-image	Impulsivity Extraversion Neuroticism	“It does not look attractive, it is embarrassing … some people puke throughout the night”	“I’ve actually got quite a lot of admiration for people who don't drink, because you've stood up for what you believe in and what you want. It must be quite hard to do”
Perception of a prototype of a drinker and non-drinker	Prototype	“Less sociable but more sensible in a way”	“There are some who try to fill up”
Motivation to stay within safe limits	Identified regulation Intrinsic motivation Introjected regulation External regulation	“If I was driving and not paying attention to the roads properly and all of a sudden I hit the pedestrian Reason is my health Keep up appearance for the girls If I get completely drunk I would fool myself”	
Negative life event		“Had to go to hospital when they wash your	“Historically students are getting done for

		stomach because I got alcohol poisoning"	drinking and driving and after CRB disclosure comes and they are excluded from the course"
Attitudes and beliefs	Attitudes	"I do with food. It does not have the same effect"	(students' attitude in student village) "Live in this place nobody is really gona do anything if I make nuisance of myself when I am drunk"
Expectations (person's)		"I am going to the cinema, meeting people, I expect there is always alcohol"	(During events) "Students expect alcohol"
Intentions	Intentions	"I don't have an urge to drink and I don't be like I need beer right now, it is always a planned event"	(students) "They cannot go out have a good time without getting drunk I have 30 minutes I have to get drunk in 30 minutes"
Knowing one's limits		"I don't really set a limit, I do drink socially but mostly I drink to get drunk"	
Finances		"Financially it will be a bit difficult since we are students … I am just not drawn to the idea of going out and drinking"	"I found there is a lot more people who actually bring their alcohol into accommodation. There is a lot lets do it at home kind of thing, lets save the money"
Willingness	Willingness	"I would accept because if they have gone … to trouble making it and then giving it to me"	
Control	PBC	"That tends to take over your life. in one	

		aspect. When it does control you"	
Strong will	Willingness	"I would probably do is, accept the drink because if they have gone you know to trouble making it"	
Economy			"Like most things have gone up, most things in the economy"
Boredom		"If I am like depressed or the company is not good and I am bored, I might get drunk so it depends on a lot of factors"	(in student village) "I saw you bottle of vodka and what were you doing … I got bored –nothing else to do around Luton"
Perceived difficulty or ease to drink	PBC Self-efficacy	"I don't like bees but once you had 2 get used to the taste and you just drink it"	
Coping strategies Personal decision	Coping	"I talk to my friends about it" "I have been through and done it myself and the only person who can help them is themselves. When you are an addict you are an addict. You are not gona listen to me"	
Enjoyment of the effect		"Just like the taste of alcohol but some people drink alcohol because the effect it has on them"	
Self-image		"It has always been the same, occasional drinker, social drinker"	"All this distance (to go to a work) people very lazy nowadays"

Family, friends, colleagues/familiarity of people and their expectations	Subjective norm	"Then with my friends I can be more stubborn and hold my ground"	
Location/activity/duration of a drinking session		"If you go to the restaurant you drink more, if you go for lunch at uni then less, circumstances definitely control how much you do or you don't drink"	(in student village) "I think the assumption is always that the halls of residence is always for the first year and it is just like everyone os going mad and it is partly true"
Number of people		"You wana be a life and a sole of the party so I think when there is more of you going out you drink more"	
Mood		"I do not drink if I am in don't want to be there mood"	
Enjoyment of occasion		"Music, more lively, energy different, conversation is different quantity is different, with friends 6 onwards, with friends I don't mind being stupid"	"Freshers usually is a two week thing so just short two weeks but again there is alcohol served … the idea is not about alcohol but meeting new friends"
Availability of drink/favourite drink		"Oh, depends on what kind of drink and my mood… if it is Jägermeister which is my favourite drink I will be perfectly fine"	
Year of study		"During the first year there are more opportunities to drink"	"I suspect there is quite a lot associated with sports teams you know traditionally

		rugby teams and football teams tend to drink quite a lot"
Other people's drinking behaviour	"When everybody is drinking you tend to drink more. Less people it is mellow"	"I was gona say the round system leads to ... when people buy round of drinks … puts you under pressure to drink more"
The way of being	"They are still growing up they know what is right and what is wrong, cause they have been brought up with that"	
Drinking alone	"I don't drink when I am at home on my own, it is only when I go out"	"Students had mental health issues as a result of overindulging"
Religion	"I am Christian and as a Christian you are not allowed to drink, but personally I sometimes, if you drink and control yourself"	
Culture	"You have to try Guinness punch, it is a can of Guinness and majority of the tin of condensed milk" (Caribbean culture)	"It's always amusing that when it is really nice day, it's a good day for a beer garden"
Policy	"I felt like, that's what you do when you are 18, you sort of try this (binging) and then but I soon got over it"	"I am not gona go out – I cannot smoke"
Environment	"When you have grown up in the environment I have, you kind of get	

		accustomed to it"	
Avoiding negative consequences		"I don't want to go to GP or hospital"	"We had to do some awareness raising in the last few years about the behaviour and possible impact"
Drinking to cope	Drinking to cope	"It was very nice of her to see my girls in her house still very depressing and demotivating, so I used to drink beforehand, or when I get too happy it is learning how to control your emotions"	"Take that worry out of you and I think somehow people who drink have worries"
Staying safe techniques		"I mean unless you pre-warned your friends that you gona get very drunk tonight in which case you should take of you"	
Accessibility		"So I think there is lot more drinking in student accommodation because all the students are packed together"	"Even our corner shops are really cheap for alcohol"
Spare time			"I did social care in Ireland … so you do more hours in units" (than in England)
Rite of passage			"To see how much they can drink"
Belief		"Yeah it is harmful to my brain"	"When you think of it (organising a party) on other than to get drunk nobody comes"
Identity			"It might be something to do with

		student identity which is not of the worker … so it is not clearly defined"
Course at university	"Being first year there are more opportunities to drink"	"You might find a different pattern amongst sports players than the general students"
People and expectation	"My friends they can definitely have influence and even work colleagues … I guess peer pressure"	"Round system, I think it is influence of a crowd would be pushing you and does not respect that she doesn't want to drink"
Knowledge	"I don't know much about units"	"And that idea of not being afraid to ask for help of other people as well, they need to come forward themselves"
Communication	"Pretend with little candy sticks everything I just say that alcohol the way they hold the wine or the brandy"	"You don't give them wrong advice if you do not know the answer"

Appendix F

F.1 Table 11.1

Table 11.1
Recommended Interventions for Environmental Factors and Personal Factors of the Behaviour Execution

Influence / themes emerged during qualitative research	Research	Recommendations
Age Interview: age Focus groups: n/a	Early onset of alcohol use predicts later life alcohol abuse and dependence	Policy: introduce policies to minimise alcohol consumption or try to delay

		onset.
Year of study Interview: year of study Focus groups: course at university	First year students tend to drink more as they are trying to fit in	Policy: provide alcohol free socializing opportunities Intervention: Educate first year students about the risks of heavy consumption
Accessibility Interview: availability of a favourite drink Focus groups: accessibility	It creates opportunities to drink	Policy: introduce activities alcohol free, increase the price of alcohol, increase job opportunities for both paid and voluntary work, introduce internships.
Boredom, spare time Interview: boredom, Focus groups: boredom, spare time	Students have a lot of spare time	Policy: introduce more lessons and tutorials, group study,
Belief and attitude Interview: attitude Focus groups: attitude, belief	Positive attitude increases alcohol use within students. Beliefs and attitudes of staff either encourages the or discourage from implementing intervention or policies within setting	Intervention: Educate students about the risks involved. Create supportive environment for members of staff to deal with alcohol related issues by assessing needs
Finances Interview: finances Focus groups: finances	Lack of finances seems to be related with poor quality of life and alcohol is seen as cheap activity (release)	Policy: decrease tuition and accommodation fees when possible for students to have better quality of life. Increase affordable opportunities to travel or alcohol free activities
Willingness Interview: willingness Focus groups: n/a	Students tend to accept drinks when offered by a friend, especially while making new friends they cannot say ‘no’ until they build close relationship	Intervention: teach refusal skills
Motivation to stay within safe limits Interview: motivation to stay within safe limits Focus groups: n/a	Identified regulation showed to be a significant contributor of drinking and change	Information: provide your child from early years with information about looking after his health

Lifestyle changes and responsibilities Interview: lifestyle changes, responsibilities Focus groups: job/responsibility	Starting a job and having responsibilities seems to be related with less alcohol use.	Policy: offer jobs in the area and other opportunities to gain skills and knowledge
Family and friends or other peoples drinking behaviour Interview: family, friends, colleagues/familiarity of people and their expectations Focus groups: people (their expectations) and organisations involved	Parents have an influence as modeling and their encouragement of friend choice can be positively influence the drinking	Policy: involve parents and provide them with necessary information about alcohol use and misuse and consequences and about the skills needed e.g., refusal skills
Location and activity and duration of a drinking session Interview: location and activity and duration of a drinking session Focus groups: location/place	Accessibility increases alcohol use. Certain places were associated with excessive use of alcohol.	Policy: arrange bars and nightclubs keeping in mind choice architecture If needed, policy of reducing party time can be implemented in student hall.
Number of people Interview: number of people Focus groups: n/a	The more people the more alcohol is consumed	Policy: if any difficulties within student village to keep alcohol intake to safe limits introduce appropriate policies and enforce them
Drinking alone Interview: drinking alone Focus groups: drinking alone	Drinking alone is linked to drinking to cope which usually leads to excessive consumption.	Screening: identify at risk students and offer support
Religion Interview: religion Focus groups: n/a	Being religious is connected with less (heavy) alcohol use	Screening: being religious is indicator of drinking less
Policy Interview: policy Focus groups: policy and procedures	Policies introduced in a macro and micro level have reduced consumption	Policy: careful assessment of needs for policies and enforcement can help in reducing alcohol intake

Communication Interview: communicating messages and effect of social media Focus groups: communication	Promotion messages and offers on drinks in university and off site has increased students alcohol use	Policy: do not promote alcohol on site, put more tailored messages, do not have health messages for a poor health as a consequence of long term alcohol use.
Coping Interview: drinking to cope Focus groups: drinking to cope	Students use alcohol to cope with stress	Interventions: offer adaptive coping strategies
Perceived norms Interview: family, friends/familiarity of people and their expectation Focus groups: people (their expectations) and organisations involved	It has shown that students overestimate both descriptive and injunctive norms which leads to increased use of alcohol	Intervention: inform about misperceptions.
Expectancy Interview: positive alcohol expectancies Focus groups: positive alcohol expectancies	Positive alcohol expectancies were feeling of confidence, relaxation, helps with shyness, makes easy to make friends	Intervention: brief motivational intervention can be used. Reduce social anxiety by teaching socialisation skills
Environment Interview: environment Focus groups: n/a	There are views alcohol is a part of college life. Starting university and being 18, at legal drinking age increases student alcohol use.	Policy: Increase price of alcohol Increase enforcement of campus alcohol regulations Provide adult presence in student halls Increase various activities